A Formula for Fluency?

An investigation into the effect of instruction in formulaic sequences on oral fluency in Irish

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Tháinig ciúnas, ciúnas diamhair san áit.
A quietness, a mysterious silence fell.

Helen Ní Shé, Raidió na Gaeltachta

Declaration and Permission

I hereby declare that this thesis submitted in candidature for the degree of Doctor of Philosophy at Trinity College Dublin is entirely my own work and has not been   previously submitted for a degree at this or any other university.

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Acknowledgements

Summary

The aim of the present study is to investigate the effects of a programme of instruction on oral fluency in Irish. The programme design was informed by a focus on formulaic language and by the use of procedures designed to prompt the acquisition of formulaic language. The area of formulaic language had generated much interest in language learning, however the body of research on pedagogical approaches and instruction effects is relatively small.

Irish is a minority language and many students have minimal contact with the language outside of the classroom. Many students also regard the language, and subject, with some ambivalence. Fluency implies an ease and naturalness in language use, it was hoped the programme of instruction would enhance students' experience of the language and their engagement with it.

Chapter 1 presents the context for students and the challenges posed in the teaching and learning of Irish at second-level. In Chapter 2, the concept of fluency in speaking is addressed from a psycholinguist and cognitive perspective. The present study is interested in the development of fluency, the broad thrust of Chapter 2 is that speaking fluency is underpinned by cognitive fluency. A close examination of the processes of automaticity and proceduralization is carried out, and a consideration of how these processes can be supported in the language classroom.

Chapter 3 presents research on formulaic language. In brief, this very broad field is organised primarily around efforts to describe formulaic language and the benefits it has for users. Again, close attention is given to the relevance for the language learner and the implications for the classroom. Chapter 4 details the core principles informing the design of the programme of instruction, and describes the central activities. In Chapter 5 the research questions and hypotheses the present study addresses are presented, along with a description of the testing measures. In Chapter 6 these research questions are addressed through a close examination of testing data. The final chapter, Chapter 7, discusses more broadly the findings, conclusions and recommendations arising. Volume 2 contains materials developed for the programme of instructions and test transcriptions.

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Introduction

Background notes

Within this thesis there is a personal story. For most children growing up in Ireland, the Irish language is a compulsory school subject from the age of five or thereabouts. The language I met in school carried an ideological charge. We met our language through grammar drills and stories describing places and people remote from our experience, that existed for us perhaps only as fictions. The assertion that Irish was 'our' language, the language of the Irish people, seemed a strained notion, like holding a Daguerreotype of old folk that happen to be your kin, and staring hard to find a likeness, a call to you. Engagement with the language was, for the most part then, dull and dutiful. My family had no link to the language, apart from solitary traces in words like *foostering, spág, strealish,* 'fussing, clumsy-footed, unkempt' woven seamlessly in English discourse but clearly of a different kind.

I returned to Irish as an adult, a draw which became more compelling when I stumbled across Raidió na Gaeltachta, an Irish language public broadcasting service. I heard death notices and card games, intense discussion about fish stocks and football, laughter at jokes I didn't quite understand. The spoken voice gave a pulse to the language. Aptly, an interview heard one morning on the station provided the impetus for the development of much of the course material used in the present study. The interviewee, herself a journalist, was recounting on the tenth anniversary the events of 9/11 as witnessed by her. It was a skilful account, evocative and engaging. Events from another land, known most immediately through what is now iconoclastic imagery, were described evocatively with a poetic touch, *spéir ghorm, miorúilteach gléineach, gléineach gorm,* 'a blue sky, miraculously clear, clear blue', and the view from New Jersey given familiarity with a perspective from West Kerry, *bhí sé ar nós saghas ar nós bheifeá anseo i mBaile na nGall ag féachaint trasna ar Ard na Caithne,* 'it was as if, say, you were here in Baile na nGall looking across at Ard na Caithne'[1]. Audio obtained, I commenced transcription. The close contact this offered with the spoken language brought a new perspective on language and language in use.

Research rationale and aims

The overall aim of this research is to explore a classroom-based approach to fostering spoken fluency. The researcher is a practising teacher, and two problems in particular prompted this research. The researcher had for some time been aware of a cluster of characteristics not

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[1] Translations throughout the author's own, unless otherwise stated.

infrequently evident in the spoken Irish of second-level students: 'bookish' overly-correct production, minimalist responses, responses heavy comprised of information but lacking in discourse management and interactional markers, awkward pausing, unfilled pauses. In general, characteristics indicating for many a lack of ease in speaking the language. Speaking Irish for some students is hard work and not very pleasurable. Secondly, the available language textbooks give limited and restricted attention to the development of spoken Irish. If anything, existing materials and activities tend to reinforce bookish, overly-correct production and information-heavy responses. Section 1.4 illustrates and discusses this treatment further.

The researcher set about exploring possible interventions that could, potentially, support students in speaking with greater ease. Very quickly, formulaicity presented itself to the researcher as an avenue worth exploring. The pedagogical challenge initially seemed to find a way of thinking about instruction for formulaicity that did not result in flat, mechanical use of the clichéd phrase – the kind of use that makes formulaic a byword for speech at best considered unoriginal. It transpired the real challenge was actually for the present researcher to develop a richer, more complex and more suggestive understanding of what formulaicity in language might be. Pedagogical translation became surprisingly easier when formulaicity was informed by an understanding of language processing, rather than item-based lists.

Proceduralization of language, leading to automatization of language production, emerged as an important aspect of formulaic language processing. Pedagogical intervention was therefore focused, not on the learning of useful phrases, but on the manner of acquisition of such phrases. The proposed research aims to explore manner of acquisition of instruction in selected linguistic items, treated as formulaic units. This concern is underpinned by an understanding that one of the main contributions formulaicity can make to fluency rests in manner of production of formulaic language. Proceduralization, it is argued in this thesis, describes important changes both in language representation and in skill of use.

The proposed research has a number of aims, briefly described below.

Targeted linguistic items and chunking
The designed programme of instruction gives focus to a set of linguistic items, termed narrative devices within this study. However, the course of instruction is also informed by an interest in a more general process of language chunking, and gives attention to prompting this process in learners. Potential contributions made by both the targeted narrative devices and the more general focus on chunking to participants' post-tests will investigated.

Fluency and accuracy

Concerns have been expressed about the negative impact fluency development can have on accuracy of language production; these will be presented and discussed in this thesis. A possible trade-off may give insight into the processes of formulaic language acquisition; it would certainly have implications for pedagogical intervention, and will be examined.

Fluency and competency

It is not unusual for beginners to commence their second language learning with a handful of useful phrases, used to scaffold further language acquisition and as compensatory strategy if needed. What might formulaic language acquisition offer the high competence level students? Can the use of language expressions that are routinized and conventionalised serve as a platform for creative and complex language use? Again, examining this question may contribute to our knowledge of formulaic language acquisition and will be addressed.

Fluency techniques

The proposed research makes use of specific techniques. These techniques will be described in full, and the rationale for using these presented. The study is designed to research the effect of instruction in formulaic language use, rather than the effect of particular instructional techniques. Nevertheless, the use of appropriate techniques was deemed of crucial importance and some of the techniques employed would not be typically used in the Irish language classroom. The experience of working with these techniques, and the participants' experience of them, will also be discussed.

Thesis outline

The thesis is structured over seven chapters. In Chapter 1 context is described. The context is complex, and described here as a 'problem space'. Irish is a minority language. For most, it is met as a school subject. The thesis is concerned with this pedagogical context. Using broad strokes, the context is reduced in this chapter to the perhaps predictable headings of learners, teachers, materials and exams. A large figure hovers in the background, the 40% now allocated to the Leaving Certificate Irish oral exam.

Chapters 2 and 3 comprise the literature review. In Chapter 2, the construct of speech is examined and attention given to describing characteristics of speech fluency. The cognitive process of automatization is seen to be pivotal to skilful performance and the remainder of Chapter 2 is devoted to exploring automaticity, firstly looking at where and how automaticity features in speech production. Secondly, the development of automaticity is often characterised as proceduralization and proposals on how proceduralization processes can be

prompted in the language learner are discussed.

Chapter 3 focuses on language, specifically an aspect of language it is contended is of central importance to fluency in language use: formulaicity. In the first part of Chapter 3 literature asserting systematicity in language use, in particular, the extensive use of formulaic language, is presented. Defining formulaic language is not straightforward, nevertheless there is clear evidence that distinct cognitive processes and lexical retrieval routes underpin the recognition of 'formulaic' from 'nonformulaic 'language. The functions served by formulaicity in language make a case for formulaicity to be given attention in the classroom and the discussion in Chapter 3 turns to consider the challenge in so doing. The chapter concludes with a survey of recommendations regarding classroom instruction in formulaic language.

That discussion is continued in Chapter 4, and turns to consideration of practical implementation. This chapter describes the design of the fluency programme. The challenges of conducting classroom research are noted, but the legitimacy and value of this approach are also asserted. Recent empirical research on instruction in formulaic language and the use of repetition activities in the classroom are examined. Findings from these studies which are of direct relevance to the present study are given close attention. Following sections give consideration to the selection of activities, of targeted linguistic items and of audio input. The programmes for the two courses developed are outlined. These courses are original and decidedly innovative in the context of the Irish language classroom. The final section illustrates in detail the manner in which activities developed for the programme might prompt proceduralization processes.

In Chapter 5 the experimental design is described and the research questions to be addressed are presented, along with the hypotheses derived from them. Measures to be used to investigate each hypothesis are specified, and a rationale is proposed for the use of mixed methods. Testing procedures are described and the chapter conclude with brief sections on the participants, delivery of pilot study and findings from this, and some comments regarding the delivery of the two designed courses.

In Chapter 6 procedures and rationale for addressing each hypothesis is given. Relevant data is explored in detail with each hypothesis supported or not supported accordingly. The final research question presents feedback from participants, not a central research question in this study, but nevertheless an issue of some importance. The researcher is happy to report some frank feedback was given.

Chapter 7, the final chapter, steps back to review the research objectives and design. The conclusions found in relation to each research question are then summarised. This leads to a consideration of pedagogical implications under a number of headings. The limitations of the research are readily acknowledged. The chapter concludes with recommendations for further research in a range of areas, summary comments and some final words.

Research significance

Recent research studies on the impact of instruction in formulaic language are presented in Chapter 4. Indeed, there is not a plentiful amount of such studies, and fewer again that are classroom-based. It is hoped the present research can made a contribution to this field. In addition, the researcher is unaware of any similar study with an interest in a minority language. It is hoped the present research can contribute to a discussion on the relevance of a fluency focus in such contexts. Finally, as will be made clear in Chapter 1, there is a striking paucity of research on learner acquisition of Irish in the classroom. Whether or not findings from the present research come to have any bearing on classroom practice, the researcher would be pleased to have at least made a contribution to a discussion about effective practice in the teaching and learning of Irish.

In a recent article entitled 'Experimental and Intervention Studies on Formulaic Sequences in a Second Language' Boers and Lindstromberg (2012) distinguish two ways in which formulaic language acquisition can befit the learners,

> *Width* will be taken to refer to the quantity of L2 formulaic sequences that the learner is familiar with, without specifying how familiar… *Depth* will be used to refer to the degree of proceduralization of knowledge… as well as to knowledge of the distributional properties of a given formulaic sequence in usage (2012: 84, italics in original).

The authors note that while there were a number of studies concerned with how to increase learners' *width* of knowledge of formulaic sequences, 'only a couple of studies have investigated ways of fostering *depth* of knowledge of formulaic sequences (2012:97. Emphases added). The present study is probably biased in the latter direction.

Among other things, formulaic language helps to establish identity and connection. It can help to promote a sense of ease with the language and naturalness in use, *dúchas agus dual*[2]. The majority of students of Irish have little or no connection with an Irish speaking community. However, within the classroom it is possible for a speech community of learners to develop, prompted and supported by a developing competence in formulaic language

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[2] Both terms are rich in meaning. Among many other terms, Ó Donaill (1977) defines *dúchas* as innate quality, natural, heritage and *dual* as natural and fitting.

acquired in the main through interactional communicative use. It is possible for it to become the norm for classroom friends to chat in Irish about the latest celebrity gaffe, and this as part of their language learning work. This seems a realistic and valid objective, and hopefully one this study can make a contribution towards.

Chapter 1 Learning to Speak Irish

1.1 Introduction

This chapter presents the general context for the research study, a context which may be described as 'a problem space':

> As the national language, Irish is widely acknowledged as a constitutive dimension of the national identity and an object of strong and consensual social recognition. But there exists also an explicit concern about its teaching. Although compulsory as a subject throughout the entire school curriculum and up to final examinations, in all too many cases it does not lead to a reasonable level of communicative ability in the language. It has been stated that it even presents some counterproductive effects in so far as, after a few years, many if not most students from mainstream schools show a decline of interest in its learning. (Council of Europe 2008:11).

Irish is a minority language of symbolic importance, a compulsory subject but with poor attainment rates and educational experience often not helping to promote an ongoing interest in the language. A change in language policy in education was to follow the publication of the Council of Europe report, a change that focused on developing competence in speaking Irish. This chapter establishes a context for examination of this policy change. The policy change is presented firstly, the following section focuses on learners, their experience with Irish at second-level and their attitudes to the subject.

The discussion then turns to consider the important issue of classroom materials and notes problems relating specifically to the treatment of the spoken language. This is a problem not helped by the absence of corpora which could play a vital role in developing more innovative and effective ways of developing competence in speaking Irish. Of course teachers have a central role in the classroom experience of learners and a profile of teachers and a description of their own training is also presented.

The revised oral exam and assessment procedures are then given a close examination. Bold initiatives are not untypically the cause of some controversy. Voiced concerns and a study assessing the effect of the changes to the exam, are noted.

1.2 Making talk count

'The Irish language commissioner promoted controversy in 2005 when he claimed that after 13 years of instruction in Irish most schoolchildren are incapable of a conversation in the language' (Walsh 2011:65). Controversy has not infrequently surrounded debate on Irish in schools[3]. The historical, political and social background is complex; it suffices to say the

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[3] Comments by the General Secretary of the Irish National Teachers' Association in 1941 are

legacy has, by and large, not been fortuitous for the language: a marginalisation of 'the language question' to schools, policies characterised more by pious aspirations than practical realities, and syllabuses that have lacked coherency and were poorly informed by research into best practice in language teaching. Above all, it is unfortunate that public discussion on the Irish language tends still to be characterised by empty rhetoric and emotionally-charged discourse.

On 17 March 2007 the Minister for Education and Science, Mary Hanafin, announced significant changes to state exams in Irish, increasing the marks awarded to spoken Irish. In the Higher and Ordinary Level Leaving Certificate this was an increase from 25% to 40% of total marks. In a former life the Minister herself was an Irish teacher. It is of idle interest to speculate to what degree this announcement was informed by her experience in the classroom, and to what degree it may have been influenced by her political life. She had already publicly expressed concerns about Irish in second-level schools. In April, 2006 the Minister informed one of the teachers' unions:

> I have stressed to the NCCA[4] my desire to get proposals from them as a matter of priority as to how we can reform how we teach Irish at second level, particularly to put more emphasis on the spoken language (Hanafin 2006).

A Discussion Paper published at the end of that year, 'Curriculum provision for Irish in post-primary education' (NCCA 2006) proposed a new framework for the delivery of Irish at second-level. As directed, it gave a strong focus to issues pertaining to spoken Irish and addressed the question of assessment. The broad thrust of the Discussion Paper (Council of Europe 2001), adoption of the Common European Framework of Reference for Languages (henceforth CEFR) was not mentioned in the Minister's announcement or subsequent press release (Hanafin 2007). Perhaps in recognition of a commonly perceived practice of 'teaching to exams', the Minister decided in her wisdom to focus on marks rather than frameworks. The decision had been made in a manner untypical of much of Irish politicking around contentious issues; there was no kicking to touch.

The public and media response was, overall, one of muted approval. Outside of schools, competence in a language is seen to be mainly a matter of being able to hold a conversation. The controversy sparked by the language commissioner's comments was partly phony, there

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indicative of a climate hostile to debate: '…any suggestion or request made by teachers, parents, members of the Oireachtas or other representative persons or bodies, for an impartial inquiry or investigation into the methods of teaching Irish in the schools, was invariably met with almost hysterical opposition by people who affected to believe that the request for investigation was an attack on the language itself' (cited in Ó hUalacháin 1995:132).

[4] The National Council for Curriculum and Assessment

was widespread recognition of some truth in what he had said (Hanafin 2006, see Ó Laoire 2009 for survey of relevant research and commentary).Within the teaching profession approval was more guarded, some of the concerns and questions raised will be referred to in Section 1.6. Regardless, a date had been set for the introduction of the proposed changes, and that deadline concentrated minds. The NCCA and the Department of Education and Science gave immediate focus to two areas: the structure of the oral exam and training of teachers. Spoken Irish was, perhaps for the first time in the history of second-level teaching of the language, brought centre-stage.

1.3 Learners' attitude and motivation

1.3.1 The language

The position of Irish is rather unusual. It is our first language, a badge of identity, and it is a minority language. Indeed, it is a language that has been in decline since the seventeenth century. Efforts to revitalise the language have been confined also exclusively to educational policy, along with state support given to Gaeltacht areas, regions where Irish is the language of the community. English is the language of business, politics and public life. It dominates the media and cultural spheres. Notwithstanding the strong growth in Irish-medium education, Irish co-exists in an uneasy and fragile relationship with a high prestige and globally recognised dominant language.

Irish is seen as an important marker of national identity. Indeed, the symbolic significance of Irish is perhaps one of its most enduring features. In a survey carried out 2007-8, 3.7% of the 1015 respondents wanted Irish to be the main language of the country, 5% wanted the country to be bilingual with Irish dominant and 33% wanted the county to be bilingual with English dominant (MacGréil and Rhatigan 2009). O'Rourke (2005) explored how 'lesser-used' languages are used as expressions of identity by young people. Of the 817 university students surveyed by her, 61% agreed that 'Ireland would not really be Ireland without Irish speaking people'. Interestingly, only 36% agreed with the statement, 'Language is the most important part of the Irish identity'. It is worth noting the contrast in statement type, 'Ireland would not really be Ireland' is rather vague and abstract, whereas the phrase 'the most important part' leaves no room for ambivalence. Does this indicate our attachment is somewhat notional, and that when put to the pin of our collar a more realistic position is taken? The fact that only 4% of the students surveyed reported 'the habitual inclusion of the minority language in their linguistic behaviour' (2005:278) leads O'Rourke to suggest that for most '[the] language constitutes a superficial marker of identity and positive support for the language on this level does not move beyond its symbolic function' (2005:278). She uses

a term coined by Eastman (1984), 'associated language', to describe the status of the language for many of the students, where 'the language continues to be upheld by the group as a constituent part of its heritage but is rarely if ever used' (2005: 277). In part, O'Rourke attributes this to independence, the foundation of the state in 1922 meant the language was no longer a symbol of struggle. She also reports a lack of confidence in using the language. Of the students who had attended mainstream schools (as opposed to Irish medium schools), only one tenth reported high level of spoken ability in Irish, and she suggests this:

> may explain the mismatch between their ideological support for the language and actual language use. The fact that the majority of Irish students reported either 'low' or 'moderate' levels of spoken ability in the Irish language may suggest that their perceived lack of fluency in the language leads them to downgrade its importance in defining their Irish identity (2005:281).

On the other hand, opportunities for use may not be readily accessed: 'The dearth of opportunities to use the language continues to pose one of the more serious challenges to the societal revitalisation of the Irish language (Council of Europe 2008:15). O'Riagáin et al. (2008) examined various studies on the out-of-school activities and opportunities, 'social networks', for using the minority language which were available to young people (11 – 18 years old) who were being taught through the second language. They note there is little relevant research in the Republic of Ireland but reports on a wider European study carried out with young adults in Galway city in 1997. There, 'it was found that only 17%... spoke Irish with the respondents at least 50% of the time' (2008:6). That figure is unsurprisingly higher for the native Irish speakers in the group, and the authors remark:

> moderate ability bilinguals, on the other hand, had relatively few Irish speakers in their networks and spoke little Irish with them. Therefore *the capacity of the educational system to produce bilinguals with a high level of competence is a critical factor for future developmental success*es (2008:6, emphasis added).

The troubled story of Irish, of its decline and of zealous efforts to revive it primarily through the educational system, is perhaps reflected in part in the complex set of attitudes held by Irish people towards the language. It is seen to be ideologically important but of marginal practical value. Questions of identity are complex but current research indicates they are very relevant to motivation in language learning (Gatbonton et al. 2011, Dörnyei & Ushioda 2009). The attitudes of Irish people towards the Irish language are periodically given an airing in the media and on public broadcasting, but, apart from O'Rourke's (2005) research which was carried out with third-level students, no comprehensive research has been done on young people's attitudes towards the language (as opposed to the subject). Such research would be of immense interest and value. Given the minority status of the language and the fact that Irish-speaking communities are dispersed and rural, it is likely that neither integrative nor instrumental motivation would feature very highly. The instrumental value of

Irish as *subject* is discussed below.

In fact, the notion of L2 motivation being primarily integrative or instrumental is being robustly challenged. Motivation studies in language learning are 'pushing for contemporary notions of self and identity to be brought to the core' (Ushioda & Dörnyei 2009:5). They contend that, instead of focusing on group identity, learners look to psychological inner-selves for motivational guidance. The authors distinguish between 'ideal' selves and 'ought' selves and state 'the ideal self has been usually interpreted in the literature as the individual's own vision for him/herself, while the ought self as (sic) someone else's vision for the individual (Ushioda & Dörnyei 2009:13-14). In the case of Irish, a language regarded at times with ambivalence and at times with conflicting viewpoints, is it possible that *ought* and *ideal* selves might both be internalised – and in an uneasy relationship? It is possible that people feel a loyalty to the language that is part of a collective inheritance, but not one that is going to impact on individual plans for self. These constructs of *ideal* and *ought selves* might be useful in efforts to understand the complexity of attitudes towards the Irish language. In particular, they might be of assistance in our efforts to understand and respond more positively to the needs to young people in the Irish language classroom. Certainly a useful starting point would be to dispense with rhetoric and to examine the ways in which Irish could meaningfully feature in the complex that makes up an individual's sense of identity. In the case of many young people, that may mean giving cognisance to the fact that there is no external speech community of reference, and that the target speech community may be that evolving within the classroom itself.

1.3.2 The subject

A survey carried out in 2004 of 900 first year students in second-level schools was discouraging for teachers of Irish. Among twelve specified subjects Irish received the lowest utility rating, was seen to get too much teaching time over other subjects, to be the least popular, the most difficult, and was the subject students were least interested in (Smyth et al. 2004:212-223). That picture had changed little by the time that cohort did their Leaving Cert in 2008/2009, see Table 1.1.

Table 1.1 Students' attitudes to subjects
Source: Smyth et al. 2004

Students' attitudes to subjects taken in sixth year	
Subjects liked least	Irish 36%
	French 35%
	Maths 30% (21% liked most)
Subjects found least interesting	Irish
	German
	French
Subjects found least useful	Irish
	English
	Geography
Subjects found most difficult	Irish (Higher Level) 64%
	French
	German
	Biology

In 2011 there were only two subjects where less than half the cohort taking the exam nationally did Higher Level: Irish and Maths. It is odd that there is little research carried out on students' subject choices for the Leaving Certificate, though a NCCA discussion paper (2011) is unambiguous in describing the 'backwash effect' of the 'points' or matriculation system. These choices are likely dictated by students' aspirations for third-level education as well as the perceived instrumental value of the subject, and the student's own ability levels and attitude. Students have become adept at weighing up cost and potential benefit in comparing subjects. Ó Cuinneagáin (2010) compared students' attitudes to German and Irish, and notes negative comments made by students regarding the Irish syllabus, highlighting the work-load and emphasis on literature. In recent years there has been disquiet expressed at the numbers of students being granted exemptions from Irish due to a learning disability – many of whom still took an exam in a second language (Donnelly 2009). The NCCA, referring to the Smyth (2004) survey mentioned above, comment on the distinction between subject and language referred to in the previous section:

> What is striking about these findings is the fact that the student attitude to and perceptions of Irish as a *subject* seem to be at odds with public attitudes, including those of young people to *the language*. In the consultations held as part of the review of senior cycle, while strong views were expressed about current provision for Irish in schools, there was broad support for the study of Irish and for its importance in the education system (2006:5-6, emphasis in original).

While we have noted research exploring students' attitudes to Irish, there is a remarkable paucity of research on students' acquisition of the language and most of this research has been carried out at primary-level (for survey, see O'Duibhir 2009). The present research is not aware of any extensive longitudinal research on acquisition at second-level.

1.3.3 Speaking in the classroom

The teaching of Irish within schools was indicted by the language commissioner on one measure above all: the inability to hold a conversation. One factor which perhaps does not get much attention in the general debate on Irish in schools is the student's perception of what it means to be a speaker of Irish. The average student has limited contact with spoken Irish outside of the classroom. For many, the classroom teacher may be the only person he or she might hear speaking Irish 'in the flesh'. And even this cannot be assumed! Ní Thuathail (2003:31) found 25% of teachers surveyed in her research said they used English *all the time* in the classroom. For many students Irish speakers, if they exist, inhabit 'other worlds', far removed from contemporary urban settings. Teacher talk itself tends to be very restricted, dictated largely by the exigencies of classroom management, course requirements and the varying ability levels in any class. In their preparation for the aural exam students generally work with audio material accompanying text books or from former exams. This material is scripted and is markedly different from natural speech in delivery, an example of such material is illustrated in Section 4.9 . Accompanying questions direct students' attention solely to information content of the recordings; lexical, discourse, phonological or dialectic features are not examined. An unfortunate consequence I have noted from my own experience in the classroom is that some students come to regard certain aspects of the spoken Irish and the Irish conversation they hear (such as speed, prosody, elision) as testament to its 'otherness' – and this in speech that has been carefully scripted and delivered.

Apart from answering questions, students generally are given little opportunity to speak in a classroom, teacher talk on average takes up 70% of class time (Meunier 2012). Teachers in language classes may attempt to redress this but often have to contend with practical difficulties, some of which are of more consequence and are more difficult to surmount than others. They may include: short class periods (classes at second-level are generally 35-40 minutes duration, Irish is rarely allocated a double-period as would be the norm for a 'practical' subject), large numbers (teachers of Irish often work with 25-30 students), quite diverse levels of language proficiency, limited space, and furniture that is awkward to move. Practical difficulties can present challenges for the use of less traditional activities in a classroom but some of these can be addressed relatively easily. There are factors of greater importance in promoting or hindering the development of students' spoken Irish in the classroom.

1.4 Materials

1.4.1 Classroom materials

It was noted earlier that, apart from the teacher's voice, much of the spoken input students receive in the classroom is scripted. There is a vast amount of recordings of Irish speakers readily available today. Much of this comes from radio and television, and is therefore generally in interview or discussion format, but there is huge diversity in terms of degrees of formality, speaker profile and context. One can quite easily access recordings of Mícheál Ó Sé's commentary on a close club football final, Cian Ó Ciabháin enthusing about world music[5] or young college students chatting about reality TV.

Bringing the spoken word into the classroom requires mediation however. For sure there can be benefit and enjoyment occasionally in simply listening to an informal chat among people about a familiar topic,[6] but even here there is a pedagogical choice made (one hopes) in the selection of material and the decision on how long to listen to it. One would not expect a student to develop writing skills by osmosis through reading, though this can clearly be of benefit. Likewise the speaking competence of students can improve with the experience of listening to good speakers, but that experience can be enhanced considerably through pedagogical intervention that requires students to be active in the listening process, prompted by tasks with a focus on speech as construct (Bygate 2009).

It has been mentioned that listening activities for students typically are restricted to comprehension questions, with no attention given to language features. Comprehension skills are certainly important but if we are interested in developing competence in speaking the focus then needs to be primarily on the *speaking,* not on what is said but on how this is done, a focus on features such as hedges or turn-taking devices.[7] Textbooks developed for second level students give scant, if any, attention to how one speaks in Irish. Given the central role textbooks have in classrooms, this is unfortunate.

Textbooks do give attention to the oral exam but this treatment fundamentally amounts to preparation of answers rather than development of a skill. Usually a separate unit is devoted to the oral exam though some textbooks make efforts to assist students in making links

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[5] Both to be heard Raidió na Gaeltachta, an Irish language station.

[6] *Turas Teanga*, a televised language course brought out by RTÉ, the public service broadcaster, features a 'Fuaimrian' in each episode, literally a soundtrack where listeners can simply enjoy the sound of people chatting in Irish as they carry out repairs to an engine, for example.

[7] *Vifax,* language learning activities developed around video clips from current news programme and developed for Irish by the Language Centre in Maynooth University, occasionally draws attention to such features. Characteristics of speech are discussed in Chapters 2 and 3.

across units, e.g. writing and speaking on a given topic. Typically the unit on the oral exam is organised around topics, presents lists of relevant vocabulary and gives sample answers to standard questions, as illustrated in Figure 1.1. This example is taken from one of the most popular Higher Level Leaving Certificate textbooks, *Fiúntas*. A CD generally accompanies the unit, enabling students to hear the sample answers being spoken. Some pointers may be given on strategies (such as listening to *Raidió na Gaeltachta*), and on the useful role 'fillers' can play, with lists of these presented rather indiscriminately. Students are explicitly advised to prepare and write out their 'answers', some textbooks even provide blank pages or a work book for this work.

8 Spórt

Féach ar leathanaigh 281–286 chun a thuilleadh a fhoglaim faoin ábhar seo.

Ullmhaigh na ceisteanna thíos agus scríobh na freagraí i do chóipleabhar.

- An imríonn tú aon spórt?
- Cé chomh minic is a imríonn tú?
- An bhfuil suim agat i gcúrsaí spóirt?
- Inis dom faoin uair sin a bhuaigh d'fhoireannsa an chraobh.
- Cad a cheap tú faoi na Cluichí Oilimpeacha?

Speaking: Topic questions

Cabhair!

hurling ball	sliotar	is/are exploited	déantar dúshaothrú ar
basketball	cispheil	league	léig
boots	buataisí	net	líontán
camogie	camógaíocht	rugby	rugbaí
dedicated	díograiseach	ruined by	millte ag
exciting	corraitheach	runners	bróga reatha
expensive	costasach	snooker	snúcar
fitter	níos aclaí	soccer	sacar
followers			urraithe ag
Gaelic football		**Topic specific vocabulary, mainly nouns**	trealamh spóirt
goal			feisteas spóirt
healthier	níos sláintiúla	support	tacaíocht
helmet	clogad	team/s	foireann/foirne
hockey	haca	the final	an chraobh
hurling	lománaíocht	training	traenáil
hurly/camogie stick	camán	we reached	shroicheamar

Figure 1.1 Extract from Irish language textbook

An Saorbhriathar: déan iarracht an saorbhriathar a úsáid anois is arís le linn an scrúdú cainte.

Briathar	Aim. Láithreach	Aim. Chaite
imir	imrítear	imríodh
caith		...dh
tosaigh		...h
críochnaigh		...aíodh
spreag		...adh
cáin		...h
mill	milltear	milleadh

Grammar focus:
autonomous form of verb
List of examples in 3 tenses

Éist leis an dlúthdhiosca agus déan staidéar ar na ceisteanna agus freagraí thíos.

Rian 47

Ceist: An imríonn tú aon spórt?

Freagra: Imrím peil Ghaelach. Thosaigh mé ag imirt nuair a bhí mé sa bhunscoil mar go raibh mo mhúinteoir ina thraenálaí sa chlub áitiúil agus spreag sé an rang chun clárú (*join*) sa chlub.

Sample answers on topic, audio script

Rian 48

Ceist: Cé chomh mi...

Freagra: Is aoibhinn liom peil. Bím ag traenáil gach deireadh seachtaine agus uair amháin sa tseachtain. Is maith liom a bheith aclaí agus cabhraíonn an pheil leis sin. Anuraidh fuair mé ticéad do Pháirc Uí Chrócaigh don chraobh cheannais agus bhí sé iontach ar fad, go háirithe nuair a bhuaigh Baile Átha Cliath don chéad uair leis na blianta. Ba bhreá liom a bheith ag imirt don chontae lá éigin.

Figure 1.2 Extract from Irish language textbook

English as a Foreign Language (EFL) textbooks, in contrast, typically give attention to various language skills within single units. *On Course for IELTS* (2004) level 5 (B1-B2 on CEFR scales, equivalent to Higher Level), for example, has sections on speaking, listening, writing, reading, grammar and vocabulary with each unit, with occasional sections on pronunciation. The sections on speaking are organised mainly around type of speaking task or situations, e.g. recounting a past habit, exchanging personal information. Occasionally these tasks relate to more general aspects of discourse and conversation management such as clarifying and checking information, illustrated in Figure 1,2. This particular section gives attention to the interactional nature of conversation, ways of dealing with communicative breakdown, and substituting or supplementing yes/no answers with a range of frequently used phrases expressing stronger involvement.

Passive (2)

Here are two sentences from the radio programme about *Go*.

  a *It has been played in Japan since 740 AD.*

  b *The game is played on a board with 19 by 19 intersecting lines.*

2 What does 'It' refer to here?

3 Put a circle around the topic of each sentence.

As we saw in the last unit, we often use the passive to keep the topic—the old, known information—at the beginning of the sentence.

But we also choose the passive so that we c[an] control where we put important, new informa[tion]

4 Underline the new information in sentences 'a' and 'b'.

So now you can make a rule:
In English we usually put the topic at the _____ of the sentence, and important, new information at the _____ of the sentence.

5 Why would this active sentence not be OK in this radio talk about *Go*?

  'Millions of people play it.'

> **Grammar focus: passive construction**
> **Exporation: new/old information and syntax**

Speaking

1 What is the problem in this cartoon?
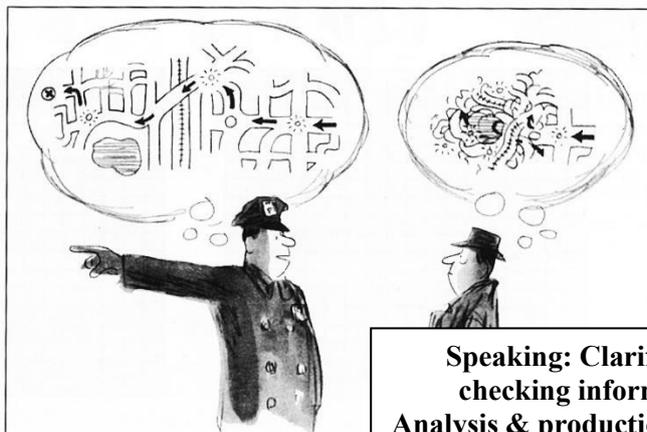
> **Speaking: Clarifying & checking information**
> **Analysis & production activities**

2 Who is responsible for solving this problem?
  a the speaker
  b the listener
  c both

3 What can the speaker do—using words, sounds, and body language—to help the listener understand?

For example

  — *'Have you got that?'*
  — *watching the listener's facial expressions*

4 What can the listener do to check his or her understanding?

For example

  — *'So, what you're saying is ...'*
  — *'What was that again?'*

5 You are going to describe a game to a partner. Before you speak, make notes on the following:
  a history (if you know)   **d** aim
  b played on/with ...   **e** rules
  c interesting because ...   **f** played by ...

Figure 1.3 Extract from EFL textbook

Try to choose a game which your partner will not know. If you cannot think of an unfamiliar game, do the activity without naming the game, and see if your partner can guess what it is.

6 Read the rules for the game below. If there is anything you do not understand, talk about it with your classmates and teacher until you do understand.

7 Now play the game.

The Yes/No Game

Aim: to make your partner say *yes* or *no* and collect al...
Played with: five counters each (coins, matchsticks or...
Number of players: two
Procedure:
Each player starts with five counters.
Start a conversation in which you try to make the other person say *yes* or *no.*
Each time someone says *yes* or *no,* they must give one counter to their partner.
Other rules:
You must also give up a counter if:
- you pause for more than two seconds before answering;
- you give the same answer twice in a row (e.g. you answer *'not much'* for one question and then again for the next question).
Winner: the first person to collect all of the other person's counters.

> **Speaking:**
> **Interactive production activity**
> **Prompting yes/no answers**

Grammar focus

There are many alternatives to *yes* and *no.* Some are listed below.

I think so.	Maybe.	Sometimes.	Not much.	Quite often.	Never.
I hope not.	Of course.	I do.	Naturally.	I have.	Quite a lot.
I used to.	Possibly.	I'd like to.	Definitely.	I love it.	Usually.
I'm not sure.	I might.	I don't.			

> **Speaking:**
> **Phrase list – Alternatives to yes/no**
> **Modifying answer**

8 Complete the table below with the words and phrases from the box.

Form	Example
Auxiliary and modal verbs	I have.
Other verbs	I think so.
Adverbs of frequency	Sometimes.
Adverbs of degree	Not much.
Modal adverbs	Definitely.
Other adverbs	Of course.
Adjectives	I'm not sure.

> **Speaking:**
> **Interactive production activity**
> **prompting modification of response**

9 Can you think of any other forms that can be used to give short answers like this?

You cannot use all of these in the same situation: it depends on the grammar and the meaning. You should always try to expand on your answer. In general, however, responding with an answer like this is:

a more interesting than saying just *yes* or *no* all of the time

b more precise: all of these answers give more information than just *yes* or *no.*

10 Play the Yes/No game again, with a new partner. This time, try to use a wider range of answers than you used the first time.

Figure 1.4 Extract from EFL textbook

While index descriptions may give little indication of quality of treatment of topics, it is interesting to note the variety of verbs used to describe the speaking components in the IELTS textbook. The figure in brackets is the number of times each verb is used in the index: describe (17), discuss (11), organise (3), doing (3), explain and elaborate (2), clarifying and checking (2), respond (2), exchanging (2), recount, persuade, present, tell, arguing, make, speculate, debate, interpret (1).

Questions in the speaking unit in *Fiúntas* are either narrow information-seeking types or more general invitations to talk, typically framed as *tell me about, describe, who, how many, what kind, what is, do you like, were you ever.* It must be acknowledged that these are precisely the type of questions students will be asked in the oral exam itself.

Table 1.2 summarises approaches taken by the textbooks considered above under a number of headings. This, of course, is basically an outline survey of the approaches. It is not an evaluation of the quality of treatment in either textbook.

	Fiúntas	*IELTS*
Location in textbook	One unit, ten sections	Integrated in all units
Format	Topic focus, identical treatment given to each topic	Variety of communicative situations and tasks
Input	Topic vocabulary lists, sample answers to questions, accompanying audio	Task descriptions, occasional features on aspects of speaking, e.g. how to paraphrase
Attention to spoken language features	Focus on form as relevant to topic discussion, e.g. tenses	Primarily lexical, e.g. phrases used to modify opinions or paraphrase. Frequently focuses on aspects of discourse listened to in unit
Attention to fluency development	General guidelines given with regard to oral exam preparation, e.g. to speak Irish with friends, listen to Irish language programmes.	All units incorporate a variety of practice activities, e.g. making presentations, interactional tasks

Figure 1.5 Comparison in textbook treatment of speaking.

The revised Leaving Certificate Oral includes a picture narration task. Textbooks provide written accounts of these stories, with little or no discussion on techniques and characteristics of oral narration. In essence, then, preparation for the oral exam is rendered similar to preparation for the long essay questions: exploration of sample answers and employing these answers to pre-prepare one's own responses.

1.4.2 Corpora and technology

The possibilities of bringing the authentic L2 voice, and a whole chorus of such voices, has been greatly enhanced by the availability of resources drawing on corpora and informed by second language acquisition (SLA) principles. Irish is a minority language, apart from *Vifax* mentioned earlier, there is not a wide range of programmes developed for classroom use, and even less with a strong focus on the spoken language. As yet there is no extensive corpus of spoken Irish though one is currently being developed (Uí Dhonnchadha et al. 2012). It is hoped that, when complete, the corpus will contain approximately 2 million words, with dialectical variation represented. The corpus will include native speakers (Gaeltacht and non-

Gaeltacht) and non-native speakers talking in a variety of contexts and on a range of topics. It is believed the corpus 'will provide material for linguistic research, lexicography, the teaching of Irish and for development of language technology for the Irish language' (Uí Dhonnchadha et al. 2012:para 1). The discussion on formulaic language in Chapter 3 gives some indication of the extent to which corpora analysis can bring to light aspects of the language which may otherwise be seen to be incidental, trivial or, indeed, not even noticed. This is particularly the case with regard to spoken language, essentially transitory and 'noisy' when compared to the clean spaced words of written text. The *Touchstone* and *Viewpoint*, series of coursebooks (McCarthy et al. 2005, 2012) make extensive use of both spoken and written texts from the Cambridge International Corpus, and highlight features of everyday conversation. McCarthy (2004), describes in an accompanying booklet the methodologies employed in corpus examination and the various ways in which the textbooks were informed by corpora. Programmes developed based on spoken corpora, giving students an enhanced and active engagement with spoken material, and an awareness that Irish has the linguistic resources to carry out the demands of conversation just as English or French does, could do much to change students' attitude to spoken Irish and to foster their own spoken language competence.

1.5 Teachers

1.5.1 Undergraduates

The standard of Irish of many students on commencing, and completing, their degree has been a matter of concern for some time. Walsh & NicEoin (undated pdf) don't mince their words in their summary from a body of recent research:

> Is minic imní á léiriú faoi chaighdeán teanga na mac léinn agus iad ag teacht isteach sna coláistí tríú leibhéal, agus imní á léiriú freisin faoin gcaighdeán atá á bhaint amach acu le linn a gcúrsa léinn…Léiríonn taighde agus tuarascálacha faoin nGaeilge sna scoileanna go bhfuil ceisteanna le tógáil maidir le hinniúlacht teanga na múinteoirí atá ag feidhmiú sa chóras, múinteoirí a bhain a gcuid dintiúirí teanga amach inár gcuid ollscoileanna agus coláistí oideachais.

> Concern has often been expressed about the language competence of students entering third-level colleges and the standard achieved by them in the course of their studies. Research and reports about Irish in schools indicate there are questions to be addressed regarding the language competence of teachers working in the system, teachers who acquired their language credentials in our universities and training colleges.

Second-level teachers are required to have a primary degree in their subject, and a post-graduate teaching diploma. In their degree course in Irish students are taught and examined in courses on literature and language, with literature dominating. Apart from optional courses in phonology, dialectology and sociolinguistics, language courses by and large are focused

on developing students' own competence in the language, in particular their competence with written Irish. Among the problems in third-level teaching of Irish, Ní Mhaonaoigh (2009) identifies the marginalised place language teaching has on course schedules, the low level to which expertise and research in applied linguistics informed courses, and the status and training of language tutors.

At a conference held between third level institutions to discuss these matters,[8] the need to respond to a marked diversity in language ability among third-level students was highlighted. The student body typically is made up of native speakers, students who received primary and/or second level education through Irish, and students who learned Irish as a subject and showed evidence of struggling with the language. The need to develop language awareness for students was stressed:

> Tráchtadh ar an tábhacht a bhaineann le feasacht teanga agus gur cheart a leithéid a bheith mar ghné lárnach i mbun-mhodúl Gaeilge (Ní Neachtain 2009:150).

> The importance of language awareness was also discussed, that this should be a central feature of a basic module in Irish.

A noteworthy initiative arose from intensive discussions and co-operation between the institutions in response to these challenges. A steering group adopted the CEFR as a framework for language teaching with third-level students of Irish and appropriate syllabi has been developed and made available to third-level institutions.

1.5.2 Training and in-service
As part of the second-level teaching diploma (Professional Diploma in Education) students attend a one hour methodology class for twenty weeks in each subject they teach. Ní Ghallachair is far from convinced that this is sufficient to equip graduates with a skills set in language teaching. Noting the emphasis on literature within university language departments, she states:

> It is taken for granted by Education Departments that students' language skills are what they should be, having obtained a degree in the language, and no further attention is given to this area. There is, therefore, a disconnect between the training provided by universities for student teachers and the reality of the classroom' (Ní Ghallachair 2009:197).

She adds that this situation is compounded in the case of Irish because of the limited opportunities for students of the language to have an extended immersion experience in the language. The Council of Europe describes as one of the 'main problems' with regard to fostering Irish:

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[8] Teagasc na Gaeilge ar an Tríú Leibhéal: Fóram Plé agus Pleanála. The Teaching of Irish at Third Level: Discussion and Planning Forum. St. Patrick's College, Dublin. 15-16 February 2008.

[T]he difficulty which many teachers experience in implementing a convincing pedagogy, and the need for continuing professional development (CPD) support to help them to do so; as well as a lack of suitable modern materials and ICT provision (2008:16).

The problems with regard to ICT and materials have been noted. The Department of Education generally only provides in-service courses for teachers when there are significant changes to the syllabus. A support service for teachers of Irish, An tSeirbhís Tacaíochta Gaeilge Dara Leibhéal (Second-level Support Service for Irish, henceforth SLSS), was established in 2007, just prior to the announcement regarding the marking changes to the oral exam. Its brief was to support teachers in the promotion of spoken Irish in the classroom, above all through the use of a communicative approach in the teaching of all aspects of Irish. Since 2008 the SLSS has engaged in a wide range of activities including inservice days, training in technology, workshops, school visits, and the provision of resources online. The approaches taken by the SLSS could, in some ways, be seen as a mission to convert. For many years teachers have been delivering a curriculum dominated by the written word. They may have had reservations about this curriculum but, of necessity, developed an expertise in the teaching of it. Teachers were seen as central to the changes in the oral exams bearing fruit. They had to come on board. This involved providing them with appropriate skills and resources. It also required developing confidence in, for example, using *Photostory* and podcasts, in preparing audio blogs and having students work in teams on communicative tasks. The SLSS team work with enthusiasm and conviction, and at all times endeavour to draw on teachers' own experiences and resources, and to foster a learning community among teachers.

The impact of the SLSS on teachers' practice has not yet been assessed. The following opinions relate mainly to the inservice days provided and are the researcher's own. Inservice days have probably been at the core of the SLSS programme, between 2008 and 2012 there have been seven inservice days, attended by the vast majority of practising Irish teachers. For the most part the activities, resources and approaches discussed on inservice days were informed by Communicative Language Teaching (CLT) and Task Basked Learning (TBL) principles, with a Focus on Form (FoF) approach to consolidating grammar through speaking tasks. In general the activities, resources and approaches were imaginative and fun. However, there was little focus on characteristics of speech in Irish. Again, the following reservations reflect the researcher's own personal experience and views on the inservice provided.

1. Volume.

The amount of ideas, the diversity of approaches, the number of games: the more choices one has, the more difficult decision making can become. The weight of possibilities can feel overwhelming, making the task of discriminating, choosing and implementing more difficult.

2. Lingering questions.

Imaginative, fun – but these workshops involved co-operative teachers, who had little difficulty in understanding instructions. Practical and pertinent questions were not given a great deal of attention. How much disruption/noise/preparation/learning will be involved? What if it doesn't work? The gap between an inservice workshop and classroom can become a gulf, discouraging and daunting. That gap needs to be recognised.

3. The textbook temptation.

The Department syllabus, in particular its description of functions, notions and topics, was used by the SLSS as the basis for the development of class plans, methodologies and assessment practices (Nic Eoin 2009). As admitted by Nic Eoin in the same article, the syllabus is given scant regard by teachers:

> Ró-mhinic, áfach, téitear i muinín na dtéacsleabhar amháin leis an nGaeilge a theagasc, agus déantar dearmad go bhfuil foinse luachmhar a bhfuil bunús teangeolaíoch agus oideolaíoch fiúntach léi sa siollabas seo (2009:119).

> Too often, however, it is textbooks and textbooks alone that are resorted to in teaching Irish, and people forget there is a valuable resource, with a solid linguistic and pedagogical basis, in this syllabus.'
> '

Syllabus does not translate readily into class curriculum. Teachers often resort to textbooks to provide this, and textbooks in Irish are typically content-heavy with a restricted range of activities. The textbook is part of routine classroom activity in most classes, and unfortunately is marked by a lack of communicative activities in general, and by negligible treatment of the skill of speaking in particular.

4. The exam

For teachers, parents and students, those parties most intimately bound to the Leaving Certificate, the exam is of paramount importance. The practice of teaching to exams is not unknown, and is expected even by some students:

> Many middle-class and high-aspiring students expressed impatience with, and were critical of, teachers who did not focus on 'what would come up in the exam'. For them, good teaching constituted practising exam papers and focusing precisely on the kinds of knowledge and skills needed to do well in the exam (Smyth et al. 2011:225).

The oral exam is awarded 40% of marks, one might think then that even from a narrow

instrumental perspective, developing oral competence would become central to classroom practice. The story is not as simple as might appear, however. The exam itself, and details of assessment, will be scrutinised further in Section 1.6.

No comprehensive independent research has been carried out on classroom practice in the Irish language classroom[9], documenting practice and articulating the experience and views of the various stakeholders. Many of the remarks made above are in the nature of general observations or, as indicated, comments based on personal experience. It is unfortunate attention has not been given to this. Funk, for example, suggests an interesting connection between the classroom practice of grammar teaching and language status:

> Teachers and learners expect a fair share of grammar work in the classroom which seems to be especially true for teachers and learners of less commonly taught and researched languages (Funk 2012:309).

Funk proposes this is primarily a reflection of teacher education, with better trained teachers using more balanced approaches in the classroom, but does not cite supporting research.

1.6 The exam and assessment

1.6.1 Overall changes

> Is é íoróin an scéil ar fad ná nach bhfuil ag éirí le foghlaimeoirí an teanga a shealbhú… bíodh is go bhfuil an bhéim ar fad, geall leis, sa churaclam "nua" ar an teanga bheo agus ar úsáid chumarsáideach sa ghnáthshaol laethúil agus ar shealbhú nádúrtha na teanga tríd an gcumarsáid féin. (Ó Laoire 2009:108).

> It is ironic that even though the emphasis in the 'new' curriculum is almost completely on the living language, on communicative use in daily life, and on natural acquisition through communication itself, despite this students are not succeeding in acquiring the language.

In making this stark contention, Ó Laoire sees the distinction between planned and experienced curriculum as relevant. For many the experienced curriculum in Irish is the curriculum taught to meet exam requirements. It is important, then, to compare exam requirements prior to and after the introduction of the marking changes, shown in Table 1.3, and to consider the likely impact in the classroom.

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[9] The Department of Education Inspectorate carry out periodic subject inspections.

Table 1.2 Leaving Certificate Irish mark allocation

Leaving Certificate Higher Level Irish: Allocation of Marks				
	2012		**Pre 2012**	
	Marks	**%**	**Marks**	**%**
Oral	150	40	150	25
Aural	60	10	100	16.66
Composition	100	16.66	100	16.66
Reading	100	16.66	70	12
Literature[10]	100	16.66	180	30

The Oral exam will be examined presently. The Aural mark was reduced from 16.7% to 10%. Given the intrinsic link in conversational interaction between speaking and listening, this is somewhat strange when the avowed objective is to improve communicative competence. Marks for composition, and the composition task itself, did not change. Composition is the main writing task on the paper. Students are asked to write an extended essay or story, and the practice of students learning chunks or whole essays by heart is well known. One task, one language register - one might well ask about the communicative nature of this question, and it is not difficult to imagine the pedagogical practice it encourages.

The question on the history of the Irish language and literature has been removed from the exam. This question badly needed to be reformed. Its scope was too wide, and encouraged reduction of information to bullet points. However it was the only section on the course that could potentially give students an insight into the connections between Irish and other European languages, its unique history, its dialects. It also described the variety of organisations working with Irish today. The literature component of the course has been reduced but is still significant, and takes a good deal of class time to prepare. For many students this is probably the least attractive aspect of the course. English is the only other Leaving Certificate subject where students are required to study literature. In comparison to the English course, many find the prescribed literature in Irish to be of low merit. From a language learning perspective, the literature is not of great benefit to students. Students resort to textbook notes and to learning answers off by heart. The ability of students to learn by heart is quite simply the employment of an exam strategy.[11] That is, in part at least, the

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[10] Prior to 2012 a language history question was examined along with literature.

[11] A strategy periodically noted by the Exam Inspectorate in their reports: '…ní mholtar an nós atá ag éirí níos coitianta, is é sin píosaí móra próis , atá lasmuigh de ghnáthraon cumais an iarrthóra, a chur de ghlanmheabhair…. is cinnte nach gcruthaíonn sé go mbeidh an teanga sealbhaithe ag na hiarrthóirí sin' (Coimisiún na Scrúduithe Stáit 2008:39). '…a custom becoming more commonplace, and one not recommended, is candidates learning large chunks of prose that are

reason why some can write extended text without appearing to have learned much about the language; that is not the object:

> Leanfaidh said orthu ag foghlaim cén chaoi leis na ceisteanna a fhreagairt agus leis na cleachtaí a dhéanamh ach ní fhoghlaimeoidh said an Ghaeilge ar aon tslí fheidhmiúil' (Ó Háinle 2003:13).

> They will continue learning how to answer questions and to do the exercises, but they won't learn Irish in any kind of functional way.

Finally, apart from being allocated extra marks, two other changes were made to the reading comprehension question. A previous requirement for candidates to write the answers in their own words, as opposed to quoting from the text, has been done away with (apart from making required pronoun or tense changes). In addition, one of ten questions on each text asks students to give an example of a particular grammatical feature, and one question on each text asks the student to identify the genre in question, or to give an interpretative response.

In summary, apart from the changes in marking, we note then:

- Some reduction in literature component
- Apart from two new questions, a simplification of the reading task
- Deletion of question dealing (in part) with the development of language, dialectical features, and presence of the language in society today
- Reduction in marks for the aural exam

It could be argued that these changes are neither collectively coherent nor in keeping with the Minister's intention 'to promote the use of Irish as a communicative language in schools and classrooms' (Hanafin 2007). But before making a final conclusion, the oral exam itself needs to be considered.

1.6.2 The oral exam

In January 2009, prior to a decision on the precise format of the new exam, An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta[12] (henceforth COGG) published a Discussion Paper on the Irish Oral Exam (Maunsell 2009). They welcomed the strong emphasis given by increased marks to oral competence but advised the change 'does bring into sharp focus the robustness of the current oral assessment procedure and any future revisions that may ensue' (Maunsell 2009:3). The Discussion Paper surveyed relevant research on oral

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> beyond their language ability…this is not proof that these candidates have acquired this level of language competence.'

[12] The Council for Gaelscoileanna and Gaelscolaíochta, Irish-medium schools.

assessment and put the existing oral format – exam structure, examiners and marking – under rigorous scrutiny. In conclusion it recommended:

- [T]here should be a greater variety of tasks and elicitation procedures deployed over the course of the test in order to capture a range of language functions and a truer picture of 'real' communicative ability.

- The overall structure of the test should be clearly identifiable and proceed through distinct phases or parts which are accurately timed. It is important that candidates are given 'fresh starts' over the course of the test and that examiners have a framework to follow.

- The reading part of the current test is a very weak component and of limited value in terms of oral proficiency. Anything pre-scripted or rehearsed needs to be disencouraged as it has a negative backwash effect on teaching and learning and disallows spontaneous communication.

- Because of the difficulty of conducting the test and keeping tracking of the candidate's performance, in order to ensure the reliability of the assessment, it is necessary to have a second tester present.

- Interlocutors/assessors must be selected and trained carefully[13] and be subject to proper evaluation themselves.

- A more analytical marking scheme should be developed that focuses on important aspects of oral proficiency e.g. phonology, discourse management, lexical range, grammatical control, interactive communication.

- That there be greater standardisation of examiner questioning and topic selection.

- Communication involves the productive skills of speaking and writing and so it is desirable that they are equally weighted e.g. 200 marks each.

- The receptive skill of listening should not be devalued and should be equally weighted with the other receptive skill of reading e.g. 100 marks each
(Maunsell 2009:16-17).

The argument for appropriate recognition to be given to the complex of skills that mark language competence in a coherent and reasoned way is well founded. With regard to task components and assessment of the oral exam, the report argues for tasks, structure of exam and assessment criteria to reflect the variety of competencies involved in the speaking. Indeed, this is a basic criterion one would set for any exam. Detailing the diverse aspects of speaking competence in such a manner would also have practical benefit for classroom pedagogy and would, in itself, enhance the metalinguistic awareness of students.

The Minister stated when announcing proposed changes to the Leaving Certificate exam

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[13] At present examiners attend a marking conference and are issued guidelines but they do not receive any training.

that:

> Candidates for oral Irish examinations will be required to demonstrate a variety of oral competences in Irish. Therefore, the time required for the Leaving Cert oral will be increased to allow for this. In addition, the content and format of the oral exam at Leaving Certificate level will need to be completely reviewed (Hanafin 20007).

In fact no changes were made to the time allocated the oral, a 15 minute exam. Likewise, no changes were made to assessment structure, apart from mark allocations. However changes were made to content and format, as illustrated by Table 1.4.

Table 1.3 Structure of former and revised exam

Structure of Leaving Certificate Oral Exam (Higher and Ordinary Level)						
2012	**Tasks**	**Marks Total 250**		**Pre-2012**	**Tasks**	**Marks Total 150**
1 min	Greeting 5 set short-answer questions	5			Not examined	
2 mins	Poetry reading. From prescribed list	35		5 mins	Reading of text. From five pre-prepared texts	30
4 mins	Story narration From set 20 picture sequences	80			Not examined	
6-8 mins	Open conversation	120		10 mins	Open conversation	120

The changes have met with some critical response. A group of Irish language organisations involved in education formed an umbrella body, Meitheal, to lobby against them. Their concerns were two-fold: the inappropriateness of the exam for students from a Gaeltacht area or students with excellent proficiency in the language[14], and the structure of the new oral exam. A flavour of the response from Meitheal is given in the following remark:

> To say that this [reciting a poem] flies in the face of good practice is a total understatement…. Students could get half the marks without... telling us anything about their communicative language ability (Donnelly 2010b).

1.6.3 Some effects

In 2012, the revised Leaving Certificate was examined for the first time. The detail of these changes has been presented. In brief, the amount of literature to be prepared by students was reduced (with marks reduced from 30% to 16.66%), while the amount of marks going for an

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[14] Conradh na Gaeilge have argued strongly, based on a position paper written by Little (2005) for separate language and literature papers in order to address the needs of such students.

oral exam of the same length increased from 25% to 40%. Student response with regard to subject level chosen was pretty immediate, as can be seen by Table 1.5.

Table 1.4 Student numbers for Leaving Certificate Irish

Year	Higher Level %	Ordinary Level %	Foundation Level %
2014	40.0	51.5	8.4
2013	38.0	52.8	8.9
2012	37.1	53.5	9.7
2011	32.3	56.8	10.9

The growth in numbers interested in taking Higher Level Irish at Leaving Certificate is to be welcomed. It also provides evidence suggesting that, for many, the decision to take Higher Level Irish relates to factors such as amount of work involved and perceived difficulty of exam – practical, utilitarian motives.

The revised exam came into effect in 2012 and as yet there appears to be just one study available which has carried out a detailed investigation into its effect, this explored the impact of the changes on students' general competency levels in Irish. In addition, the State Examination Commission (SEC) issued an Inspector's Report for Irish in 2012, a short document with brief comments on student performance in all components of the Leaving Certificate exam, this will also be presented. To date, there are no studies available presenting the teachers' experience, though it is understood the NCCA has engaged a study of this nature.

Ní Mhaonaigh (2013) analysed the effect of the revised exam using a comparative study. Third-level students (n=96) who did the old Leaving Certificate, in 2011, were given tests in listening, writing and speaking a few months after the Leaving Certificate. The same tests were given to a group (n=87) who sat the revised Leaving Certificate exam and got similar grades to the 2011 group.

With regard to competency levels, Ní Mhaonaigh found there was no significant difference in oral proficiency and that the 2011 group performed better in the written and listening tasks. It is not possible to extrapolate much from these results. This was the first time for the revised exam to have been examined and it may take time for teachers to alter their teaching practice. Nevertheless, the study is interesting. Students were examined using tasks frequently employed in L2 proficiency exams. Such exams can give good insights into

aspects of L2 acquisition and competence which may not be elicited by an exam where preparation by rote is not untypical. It would be very useful to have this study replicated sometime in the future, a longitudinal dimension would allow one to draw more definite conclusions from the results.

The Inspectors' Report from the State Examinations Commission (SEC 2012) on the performance in the revised oral exam is not particularly enlightening. Many of the comments are very general, *'is mó an líon iarrthóirí ar éirigh go han-mhaith leo sa chuid seo den Bhéaltriail ná mar a tharla le tamall anuas'* 'more candidates did very well in this part of the exam (the open conversation task) than have for some time' (2012:17). The only specific aspects of students' performance in open conversation which was commented on related to grammatical competence with the Conditional Mood and indirect speech. Comments on the picture narrative task relate again to grammatical competence and also to the limited description given by some students.

Half of the exam time and exam marks are allocated to set tasks. The limitations in textbook approaches to speaking development were noted in Section 1.4.1: providing sample answers for the set tasks, and a range of sample answers for the open conversation component. Students are encouraged by this to copy, personalise, learn and memorise. The practice of teaching to exams was mentioned in the opening to this chapter, this has been noted in an official report on language education policy:

> At present, there are real concerns at the mismatch between syllabus objectives and assessment objectives and methods. The backwash effect of examinations on classroom practice and therefore on language acquisition is incontestable (Council of Europe 2005 2007:9).

As opposed to presenting distinct techniques and a focus on the distinct quality of the spoken language, which might help facilitate the acquisition of the distinct skill that is speaking; textbooks have proved adept at adapting old techniques (learn, memorise, use) to a new exam. Thus textbooks now provide *written* accounts of the picture narrative task.

The revisions made to the oral exam were bold, prefaced with a clear objective to improve competence in spoken Irish. Questions have been raised here with regard to the suitability of the revised exam. Textbook treatment of spoken Irish and preparation for the oral exam, as noted in Section 1.4.1 are also of concern, given the central role of textbooks in the classroom. To investigate the concerns raised about the revised exam, to establish if the changes have led to an improvement in the spoken Irish of students, longitudinal research in particular is required into a number of areas such as the experience of students, teachers and

examiners, the effect on spoken competence and the effect on classroom practice.

1.7 Conclusion

In his discussion of language testing Maunsell (2009:6) reasserts Bachman and Palmer's (1996) warning about testing that confuses observation of a performance with ability. Is it a similar danger in assuming that more marks will lead to better skills? It is by no means certain that the increased marks for oral Irish will entice significantly more students to opt for Higher Level at Leaving Certificate, we have seen the exam overall is still very demanding and compares unfavourably in terms of preparation requirements with other languages. Certainly students who come into second level with good Irish are likely to take Higher Level, they would probably choose so regardless of the changes. But we have seen concerns that the language skills of these students, a valuable resource to the future well-being of Irish, would neither be recognised nor nurtured by the rather dubious demands of the Oral exam for this cohort.

Serious, well-considered and cogently argued proposals have been made by the NCCA (2006), with regard to syllabus reform and COGG (Maunsell 2009) with regard to oral assessment. In essence both discussion papers advised stepping back, taking care to 'get this right'. COGG called for increased expenditure in terms of examiner training and the employment of two examiners, and argued reasonably that this would safeguard the integrity of the exam, particularly important given the weighting accorded the exam and the importance of the Leaving Certificate more generally in access to Third Level. Both organisations point to a framework, the CEFR, already adopted in the 'Teastas Eorpach sa Ghaeilge', an approved European Language Certificate developed by the Language Centre in Maynooth University. The CEFR provides comprehensive descriptors for various language competencies and related rating scales.

It is incongruous that the oral exam itself, as currently structured, now may encourage a display of 'performance' over the development of competence. It is unfortunate that the language programme met by students in the classroom, for the various reasons explored above, may still not do a great deal to foster their actual ability to speak Irish naturally and with ease.

What are the factors that help one speak naturally and with ease? The next two chapters address this question. In Chapter 2, the cognitive processing underpinning fluency is discussed, while Chapter 3 considers the formulaic nature of much language use.

Chapter 2 Speech Fluency and Cognition

2.1 Introduction

This chapter addresses the question of what is entailed in speech fluency. Firstly, a description of speech features is provided in order to operationalise 'speaking' as a distinct construct. The following section focuses on the more challenging question of describing and measuring speech fluency, and examines various approaches taken.

Kormos (2006) states research in L2 speech production is informed by two main approaches: cognitive psychology (more typically addressing the application of L1 models to L2 speaker) and applied linguistics (often addressing issues around learning). Fluency is one aspect of language use where research is enriched by drawing on both strands. Theoretical and experimental research on fluency acquisition has made an important contribution to an understanding of oral fluency, and to analysis of fluency development of language learners. The concept of automaticity is of importance in this research area and Section 2.3 gives intensive treatment to the concept: attempts to define and to describe its features and a route to automatization are presented.

In Section 2.4 the discussion turns to a consideration of automatization and speaking. Levelt's influential 'blueprint of the speaker' is presented, noting in particular procedures seen by Levelt to be automatized. Turning to an examination of speech input, a detailed presentation is made then of the phonological loop, which it is argued has a pivotal role in sequencing speech and the establishing of long-term representations of form-meaning structures. This leads to a consideration of chunking theory.

Finally, the challenge of developing automaticity in performance is discussed. Practice and repetition dominate many studies in the area of skill acquisition and expertise. Consideration is given to how practice can foster proceduralization in particular. To illustrate possible pedagogical approaches, sample activities are presented from the course designed for the present research.

2.2 Speaking

2.2.1 The speaking construct

For most of us, competence in speaking is acquired easily, early and naturally while the skills of writing and reading, for most of us, are fostered over time through formal learning. We learn how to hold and control a pen, how to recognise sequences of letters. There is a well-trodden route in the formal teaching of writing and reading, a tradition and experience that

helps to inform and critique developments and changes to syllabi, practice and assessment.

The distinct characteristics of the language of speaking and of writing in many ways have been regarded as somewhat peripheral in the L2 classroom[15]. While students may be given plenty of speaking practice they may not be asked to explore aspects such as the rudiments of speaking in conversation, the discourse features characteristic of speech, the interactional demands made of the speaker. This may be due in part to our first language being acquired effortlessly and in part to the esteem given to the written word. It may also be because spoken language had not been given much analytical interest within linguistics, until ethnographic research and Hymes (1972), in particular, brought to light the routinized, patterned and distinctive nature of spoken communication, confirming that spoken language has 'rules of use'. The development of corpus technology and of corpora of spoken language, giving access as it does to an astonishing amount of material and providing sophisticated tools for data extraction, has boosted research interest tremendously and 'has resulted in an increasingly empirical linguistic account of the characteristics of spoken language' (Bygate 2009:417).

This chapter is primarily concerned with fluency in speech. In Chapter 3 features of language in use and of spoken discourse are described. It is not necessary here to present a comprehensive account of speech features, except insofar as these are of direct relevance to fluency. It is important, however, to have a broad understanding of how speech is shaped as a communication system. Attention given to speaking in the classroom, as with all language skills, needs to be informed by an understanding of what is particular to that language skill. In Chapter 1 we noted the practice, encouraged by some textbooks, of students preparing for the Leaving Certificate oral exam in Irish by diligently writing out sample answers; thus rendering the oral exam for some, in part at least, an oral recitation of written material. Bygate (2009) makes a compelling case for looking at distinctive features of speech as a system by arguing that, without such understanding, speaking becomes a *medium* for communicative activities in the classroom, rather than the *target skill*.

Giving consideration to speaking as target skill, Bygate elaborated a 'construct of speaking' and this description is presented here. Bygate asserts, 'The validity of the construct… depends on evidence of patterning that is distinct from that of written language, and which can be meaningfully related to the circumstances of its production' (2009:415). Of course to

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[15] Carter and McCarthy (2015:2)), however, note the *Vulgaria,* school grammar texts, contained sentences from everyday life which 'were often colloquial and redolent of conversation', they suggest grammar learning involved students speaking such sentences in their daily school life.

even talk about patterning indicates speech is not understood as comprised of discrete utterances. In the course of speaking, a piece of discourse is elaborated, sometimes monologic but more typically through interaction. Four areas are given attention by Bygate, two focusing on traits and context and the others relating to psycholinguistic processes. Presented in turn, these are: the general characteristics of speech, the conditions of speech, the processes of production and the process of development.

Speech characteristics

Dimensions proposed by Chafe (1985) to capture the linguistic differences between speech and writing have been broadly confirmed by research. The dimensions are those of fragmentation/integration and involvement/detachment. Speech typically is strongly marked by fragmentation and involvement. Bygate elaborates:

> 'Fragmentation' refers to the relative lack of group modification and subordination, the relative frequency of sub-clause level unit or fragments, and the occurrence of overt 'editing' features…Occurrence of these features implies relatively low density information content, low complexity language, and more parataxis

> 'Involvement' covers features which signal personal identity and group membership…and those which convey personal feelings and attitudes to the interlocutor or the content of discourse

> [corpus analysis] suggests that talk is characterized by a range of phonological, lexico-grammatical, and discourse patterns… many of which are significantly more common in speech (such as here-and-now deictics, first-and second-person pronouns..) or cluster distinctively in speech (such as parataxis, or particular formulaic expressions clustering with complement constructions) (2009:416-7).

Some of these features are illustrated in a brief extract from a conversation from the Cambridge International Corpus (McCarthy 2005:27). The speaker is replying to a friend seeking advice on holiday plans. The extract comprises one speech turn with two pauses (indicated by …). The layout of the speech turn below is designed specifically to highlight fragmentation within it.

> Okay
> Um well let's see
> You're gonna want to…
> You're gonna want to see
> I mean since you're there two weeks
> You're you're probably gonna
> You know you're just gonna have to see the…
> You're not gonna have time to really wander around
> and so you're gonna want to go where the churches are and

Teachers might balk at the thought of 'teaching' students to speak in L2 in this manner. I would argue that, by and large, constructing speech in this manner doesn't need to be taught,

students already do this in L1, but it may need to be encouraged. Granted, 'learners need to have access to the kinds of markers of involvement and fragmentation, and engage in activities under conditions in which those markers play a part' (Bygate 2009:417). Thus, for example, attention might usefully be given to the 'formulaic expressions clustering in the complement constructions' noted above (Bygate 2009:417). Learners may also need to see L2 speech production in a different way than that presented by the scripted textbook audio. Indeed, they might usefully start by 'reading' the speech turn above out loud, and then 'speaking' it out loud. Some students may never have given much consideration to characteristics of speech. Engaging in conversational analysis can be both interesting and fun for students. More importantly, in the context of language learning, to come to an awareness that in naturally occurring speech there is ongoing and overt editing such as false starts, repetitions and hesitations, may enable students to view speech production in L2 in a more realistic way, and to bring to it some of the strategies they are already competent in using.

Conditions of speech

Bygate identifies one condition that impacts on the psychological processing of speech in two ways. The condition of 'presence' indicates 'the fact that speech is prototypically used in the presence of an interlocutor' (2009: 417); 'presence' thus entails in turn the conditions of reciprocity and time-pressure. Reciprocity means the speaker has to give cognisance to the interlocutor's own knowledge, interests and expectations, and also to facilitate the interlocutor's use of their own speaking rights. Time pressure arises from a relative lack of planning time, due again to interlocutor presence and the need to give speaking time to the interlocutor. Bygate notes these conditions of time pressure and reciprocity underpin the distinctive fragmentation-integration quality of speech, and comments further that many features of speech reflect *both* time pressure and reciprocity conditions. Thus, for example, 'formulaic hypotaxis facilitates decoding, and not just encoding' (2009:418). Further conventionalised manifestations of the reciprocity condition are:

- Attending to face
  - use of mitigation e.g. modals, hedges, vague words
  - use of metacomments *hopefully, honestly*
  - use of intensification e.g. adverbial/adjectival intensifiers, frequently using slang

- Motivated discourse structures, such as:
  - adjacency pairs
  - interactional structures, e.g. openings and closings
  - 'trouble-shooting', e.g. repairs, negotiations for meaning
  - topic and turn management

The various features and characteristics of speech mentioned thus far are hypothesized to facilitate speech production and reception. Bygate then turns to consider the psychological

processing involved in speech production.

Extensive examination of traits and context has been carried by many researchers, and specific traits and aspects of context will be revisited in Chapter 3. At this point, however, it should be noted it is strongly argued that speaking is primarily conversational, which needs to be analysed as a co-constructed text (Carter & McCarthy 2015). The interactional dimension of conversation is readily acknowledged but is not focused on in this review. To pre-empt the discussion in Chapters 4 and 5, the present research is concerned with an intensive treatment to foster fluency in production of a restricted set of lexical items, with fluency measured primarily using quite specific quantitative measures. The nature of the research study thus precludes a strong interactional dimension, though interactional activates are employed in the programme design.

Processes of production
Bygate refers to Levelt's (1989) model of speech production (and versions of), which is presented in Section 2.4.2. Of particular interest in the L2 context is the dimension of automated and controlled modes of processing involved. Within this model, controlled processing is associated with conceptual and, to some extent, with formulation phases of production, whereas automatic processing is associated with articulation and, to some extent, with formulation. Bygate remarks,

> automation is likely to be associated with markers of fluency and complexity (as a function of ease of lexico-grammatical access and articulation), and accuracy, to the extent that automated performance is resistant to interference from task pressures (2009:419).

Whether these processes are viewed as absolute and dichotomous, gradable or categorical is significant in terms of pedagogical approaches to L2 development.

Bygate suggests then, that characteristic features of speech are stored cognitively as formulaic units, routines or schema; and that they are processed with degrees of control and automaticity. The link between automaticity and fluency is pivotal to the present research and is explored in some detail in this chapter. Chapter 3 is devoted to formulaicity in language.

Process of development
The construct of oral language development proposed by Bygate draws on the well-established distinction between declarative and procedural knowledge, respectively 'knowledge about' and 'knowledge how to' (Johnson:1994). Examples of declarative

knowledge might be knowing the fingering for a chord, or knowing the plural form of a noun. Bygate describes declarative knowledge as constituted in particular from episodic memory, 'with exemplars encountered on particular occasions gradually serving to define and populate categories' (2009:421)[16]. Memories of a variety of speech events are likely to contribute to declarative knowledge. Bygate further specifies that speech events:

> are constituted along at least two major dimensions, first in terms of the pragmatic relationships projected between language features and the goals they are used for, and second, in terms of discourse structures (2009:421).

Experience of speech events, and varieties of experience, are fundamental to the acquisition of this knowledge, much of which Bygate emphasises is *not* explicit. Of course, for successful production it is not enough to have a bank of declarative knowledge, knowledge of use is required to 'muster' and activate those resources. Declarative knowledge of fingering and keys of a B major scale is necessary knowledge but not sufficient to enable one play it, procedural knowledge or rules of use, are also required[17]. Discussion of declarative and procedural knowledge is returned to in the presentation of ACT theory.

Turning to the classroom context, it is necessary then to give consideration a) to the types of knowledge that can usefully be targeted, e.g. phonological, referential, interactional, and b) to ways in which procedural ability can be developed, e.g. task selection, sequencing and use. Early approaches to oral language development often involved drilling learners with structures from a dialogue, activities which, Bygate claims:

> did not engage learners in the actual pragmatic dimensions of interpersonal talk, but merely in the manipulation and production of alternative pragmatic formulation. That is, the pragmatics of spoken language were mapped into the categorical content, but not into the procedures (Bygate 2009:423).

Elsewhere, Bygate (2006) describes how activities employing 'constructive repetition' can be employed to develop oral fluency competence through intensive activation of procedural knowledge. Pedagogical approaches to the development of oral fluency are considered in Section 2.5 and in Chapter 4..

To conclude, in his description of the speaking construct, Bygate (2009) asserts that spoken language is a distinctive system, and that speaking a language requires both knowledge of the system and skill in using it. Automaticity and the efficient working of declarative and

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[16] Usage-based models of language acquisition, which incorporate similar principles, are presented in Chapter 3.

[17] 'According to some [the] need to combine rapid reaction with flexible knowledge that can be used under changing circumstances constitutes the evolutionary pressure that led to the declarative-procedural distinction' (DeKeyser 2009:123).

procedural knowledge are posited by him as central to understanding how fluent language is produced and how competency and capacity in speaking is developed. These aspects of speech production are central to the current research study, and a fuller discussion of automaticity and the operations of declarative and procedural knowledge follow. Before turning to consider psycholinguistic processes, this section on speaking will conclude with a general discussion on oral fluency and a more detailed focus on the assessment of fluency.

2.2.2 Fluency in speech

Fluency is a highly regarded attribute and seen to be a desirable objective for the second language learner. Yet the concept of fluency is problematic for researchers and teachers. The term is widely used in research, testing, textbooks and in our everyday world. This is probably one factor which contributes to making the concept difficult to define with precision. Chambers (1997) discusses divergent orientations towards the term and sees the problem basically as relating to domain of use. She illustrates, 'the non-technical use of the word is often synonymous with *overall linguistic proficiency* rather than with strictly restricted aspects of delivery in oral production [whereas in a specific context such as CLT fluency] 'is about effectiveness of language use within the constraints of limited linguistic knowledge' (Chambers 1997:536), in other words, fluency entails a kind of *strategic competence*. The problem with both the non-technical use and the CLT understanding relates not so much to their broad scope as to their lack of specificity. Without more precision and specification of the variables involved, they are of limited value in testing of fluency or in the development of approaches for teaching or learning. However the definitions do make a useful starting point for this discussion in respectively illustrating fixed-state and relative-state orientations to the concept.

The fixed-state orientation sees fluency as marking a high degree of proficiency. This is the everyday understanding implied when one declares a person is fluent in the language. However, if by fluency one means 'the maximally effective operation of the language system so far acquired by the students' (Brumfit 1984:7), this implies that at any proficiency level performance can be described as more or less fluent. The difference accords somewhat with Lennons's (1990:389) distinction between definitions of fluency that are 'broad', 'a cover term for oral proficiency' and 'narrow', referring to 'one component, presumable isolatable, component of oral proficiency'. The emphasis in a fixed-state orientation is on knowledge and skill possessed, the emphasis in relative-state orientation is on performance, the ability to use that knowledge and skill. Within language learning, fluency is understood to refer to ability to use, a student is judged on fluency scales relative to their proficiency level. In this context, fluency is primarily a performance phenomenon. This is not to say that competence

in a particular aspect of language might not have an overall effect on fluency. Thus amongst students at a similar level, say beginners, some may have higher competence in pronunciation, or a confidence in recycling material, which might well influence another person's perception of that student's language fluency. Indeed, performance in any realm can be affected by any number of conditions, internal and external, and research has been carried out on the effect of individual factors and task conditions on learners' performance *and* the judgement of learners' performance (Bygate 2001, Dörnyei & Kormos 2000, Freed 2000, Skehan & Foster 1999).

There is another important point to make about assessing fluency. In assessing accuracy or lexical diversity, there is a single quality to be examined, already specified. It remains to detail the constituent features of that single quality and to elaborate descriptors for the various proficiency levels. Fluency describes a general aspect of performance and is therefore more difficult to operationalize. It relates to *manner* of execution, and thus relates to a cluster of qualities; being multifaceted, Lennon's (1990) expression *presumably isolatable* is advisedly cautious.

Segalowitz, citing Kaponen and Riggenback (2000), refers to 'the conceptual metaphor underlying the meaning of fluency, namely that "language is motion"' (2010:3)[18]. Fluency rates, then, not just to a cluster of qualities, but relates to how these are expressed over time. A musician has clearly marked on the score indications as to the manner in which a piece is to be played, these relate mainly to rate and pace, articulation and expression. Perhaps the most common qualities associated with fluency in the literature are rate of delivery, smoothness, and ease of delivery (McCarthy 2010). Corresponding quantifiable measures exist for each of these, though frequently a variety of measures may be employed in tandem to establish a fuller, more nuanced picture. Broadly speaking, efforts to assess fluency can be qualitative or quantitative measurement. Where a qualitative approach is used in testing, as is typically the case, task design may be standardised for proficiency levels and performance descriptors used but assessment is basically one of perception. Empirical studies on assessing oral fluency frequently explore the correlation between quantitative measures and perception. Rossiter et al. (2010) cite a body of research which correlates oral fluency with speech rate and length of run, considered here under *temporal measures* and also with pause phenomena. Pause is analysed using temporal measures but is considered further here under *smoothness*.

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[18] The Irish for fluency, *líofacht,* has its etymological root in the word for 'polished'. However the Old Irish word for speech, *bélra* can be translated as mouth-flow. This in time became modified and restricted, *Béarla* is the word for English.

Temporal measures

Table 2.1, taken from Kormos (2006), details the temporal measures most frequently used in empirical research and definitions. It is not necessary to explore in detail the relative merits of particular measures or the reason why some were deemed more appropriate in researching certain aspects of fluency, though it should be noted that usually a number of measures are employed, as establishing conclusive evidence for an investigation into either skill level or skill development from one single measure can be extremely challenging. The various measures employed for the present study are presented in Chapter 4.

Table 2.1 An overview of measures of fluency
Source: Kormos, 2006

Measure	*Definition*
Speech rate	The total number of syllables produced in a given speech sample divided by the amount of total time required to produce the sample (including pause time),expressed in seconds. This figure is then multiplied by sixty to give a figure expressed in syllables per minute. Riggenbach (1991) suggested that unfilled pauses under 3 seconds should not be included in the calculation of speech rage.
Articulation rate	The total number of syllables produced in a given speech sample divided by the amount of time taken to produce them in seconds, which is then multiplied by sixty. Unlike in calculation of speech rate, pause time is excluded. Articulation rate is expressed as the mean number of syllables produced per minute over the total amount of time spent speaking when producing the speech sample.
Phonotation -time ratio	The percentage of time spend speaking as a percentage proporation of the time taken to produce the speech sample (Towell et al. 1996).
Mean length of runs	An average number of syllables produced in utterances between pauses of 0.25 seconds and above.
Silent pauses per minute	The total number of pauses over 0.2s divided by the total amount of time spent speaking expressed in seconds and multipled by 60.
Mean length of pauses	The total number of filled pauses such as er, mm, divided by the total amount of time expressed in seconds and multiplied by 60.
Number of Disfluencies Per minute	The total number of disfluencies such as repetition, restarts and repairs are divided by the total amount of time expressed in seconds and multiplied by 60.
Pace	The number of stressed words per minute (Vanderplank, 1993).
Space	The proportion of stressed words to the total number of words (Vanderplank, 1993).

Phonological measures are not included in Table 2.1 but it has been claimed that prosodic features are an important aspect of fluency (McCarthy 2005). Kormos (2006) notes work by Hieke (1984) which investigated speech fluency as a measure of connected speech, and

Wennerstrom's (2000) study on the effect of intonation on perception of fluency. According to Kormos, Wennerstrom's study 'suggests that it is the ability to speak in phrases instead of speaking word-by-word that can lead to the perception of fluent speech, rather than longer utterances or shorter pauses' (Kormos 2006:164). Indeed, the present study aims to foster phrasal production of speech.

From their survey of empirical research, Kormos and Dénes state 'most of them conclude that the best predictors of fluency are *speech rate…* and *mean length of runs'* (2004:148), emphasis in original). Their own study correlated assessors' perceptions of learners' fluency with an extensive range of temporal measures. They found two other measures to be of importance, *phonation time ratio* and *pace.* Iwashita et al. (2008) carried out a comprehensive study on fluency indicators, with speech samples garnered under different conditions. They employed an extensive range of measures, both quantitative and qualitative to analyse the recordings, and found evidence that speech rate, silent pause rate, and total pause time correlated with proficiency level, with speech rate having the strongest effect.

Smoothness and ease of delivery

Smoothness suggests evenness, regularity in speech delivery; or an absence of disruption to the speech flow. One can readily appreciate that a number of measures might usefully be employed to analyse this quality but analysis of pause and hesitations is particularly relevant. The presence, location, distribution, length and frequency of pauses have been studied, along with hesitation phenomena such as false starts, repetitions and filled pauses (Foster & Skehan in McCarthy 2010, Iwashita et al. 2008, Lennon 1990, Skehan & Foster 1999). Pausing may, at times, be seen as indicating processing pressure but is not necessarily an indication of problem-solving. A long pause, silence, may be what is appropriate or even expected in a given context. Again, the need to combine quantitative measures with a careful study of the discourse is evident. Furthermore, it may be useful to consider data from L1 speech. Segalowitz (2010) reports on an interesting study carried out by de Jong et al. (2009) which compared oral fluency measures from performances in participants' L1 and L2. They found significant L1-L2 correlations for length of pauses, suggesting 'a great deal of fluency-related phenomena (hesitations, speech rate) may be characteristic of the way individuals speak in general and not just characteristic of their L2 speech' (Segalowitz 2010:35). This finding is supported by Chambers (1997). From her survey of fluency research she suggests frequency and duration of pausing rather than pause length may be significant.

Ease implies effortlessness. An interlocutor's attention is not generally drawn to the manner

in which an everyday question about a film is answered, but if the answer is laboured or unduly hesitant, attention will be deflected. It is not difficult to imagine that ease and smoothness of delivery are closely connected. Quantifiable measures can capture hesitation phenomena and pause features; however the notion of effort directs attention from external features to considerations of internal psychological processing. A quick look at descriptors for oral fluency assessment, in this case the CEFR, confirms the quality of processing *itself* is a component in what is being assessed. This example is taken from Segalowitz (2010:77) who emphasises the cognitive processing components in the descriptors with italics.

> A1 (lowest level) Can manage very short… utterances, with much pausing *to search* for expressions, to articulate less familiar words, and *to repair* communications.
>
> A2 Can make him/herself understood in very short utterances, even though pauses, false starts and *reformulation* are very evident.
>
> B1 Can keep going comprehensibly, even though pausing for *grammatical and lexical planning and repair* is very evident.
>
> B2 Can produce stretches of language with fairly even tempo, although he/she can be hesitant as he/she *searches for* patterns and expressions…
> C2 Can express him/herself fluently and *spontaneously, almost effortlessly.* Only a *conceptually difficult subject* can hinder a natural, smooth flow of language.
>
> C1 (highest level) Can express him/herself *spontaneously*... with a natural colloquial flow, *avoiding or backtracking around any difficulty* so smoothly that the interlocutor is hardly aware of it (Council of Europe 2001:28-29).

Effortless performance implies the performance is not demanding of attentional resources. It is frequently claimed that some degree of automaticity is inherent in effortless performance. The present study concerns instruction for fluency, therefore a comprehensive presentation of automaticity follows in the next section. Before turning to this, some final comments need to be made on fluency within the context of general proficiency.

Fluency, complexity, accuracy

Fluency is but one aspect of proficiency, other commonly studied dimensions are those of accuracy and complexity. These variable concepts have been studied for some time within SLA. In their survey Housen and Kuiken (2009) note early research gave consideration to the concepts as dependent variables within research addressing other aspects of SLA. However, they point out that developments within psycholinguistics and cognitive psychology have prompted consideration of complexity, accuracy and fluency (CAF) as independent variables and 'as principal epiphenomena of the psycholinguistic mechanisms and processes underlying the acquisition, representation and processing of L2 knowledge' (Housen & Kuiken 2009:462). Moreover, they state evidence from research suggests that:

complexity and accuracy are seen as relating primarily to L2 knowledge representation and to the level of analysis of internalized linguistic information. In contrast, fluency is primarily related to learners' control over their linguistic L2 knowledge, as reflected in the speed and ease with which they access relevant L2 information to communicate meanings in real time (2009:462).

Because of attentional capacity limitations, Skehan (2009, also Foster & Skehan 1996) postulates a 'Trade-off Hypothesis', when learners direct their attention to one aspect of production, attention given to other dimensions may be reduced. There is competition between these constructs for attentional resources. Skehan concludes from research 'simultaneously advantaging all three (CAF) performance areas is unusual… [furthermore, results suggest] that fluency can be accompanied by either accuracy or complexity, but not both' (2009:512). He admits these findings lack 'explanatory force'. They are certainly of interest in terms of a research agenda into the future. For instance, Kormos and Dénes (2004) note from their study:

> It seems that those students who were fluent in terms of speed and pace also produced accurate output. In psycholinguistic terms this means that one is only able to speak fluently if speech production mechanisms are largely automatic and if automatic sequences are memorised, retrieved and used accurately (2004:160).

They found evidence to suggest that 'among less competent speakers, speed and accuracy might be in inverse relationship with each other' (2004:160) and therefore advise within the classroom there is a need to give consideration to accuracy when engaging students in fluency work. The present research gives some consideration to a 'Trade-off', though this is not a central focus of the study.

Specifying a CAF framework for assessment of proficiency and performance is clearly a challenging task. Apart from agreeing on definitions for each concept, studies are needed to consolidate an understanding of how they interrelate at any given time. Furthermore, measurement of CAF *in* time needs to be examined for how this connects with L2 acquisition *over* time. (Ellis, R. 2009).

In addition, Skehan notes 'the lexis-syntax connection is vital in performance models' (2009:514) and consequently contends the CAF framework needs to give further attention to lexis, particularly in assessment of complexity. It is argued by Pawley and Syder (1983), and in the present study, that lexis is also vital in assessment of fluency, and that use of formulaic language, in particular, has benefits for learners with regards to accuracy. Lexical diversity is also noted by Kormos and Dénes (2004) as relevant to perceptions of fluency, while contending that fluency is primarily a temporal and intonational phenomenon. In a study which used NNS (two groups) and NS data to explore task effects on fluency, complexity

and lexical diversity, Foster and Tayakoli (2009) found where word chunking was closer to that of the native speakers (hereafter NSs), this did not have an effect on the fluency data but did have a positive effect on pausing. These findings have bearing on the present study and comments by the authors on data for lexical diversity and pause boundaries are pertinent.

> [Data for] lexical diversity of performance shows… the learners in London are far closer to the NSs than they are to the learners in Tehran... Knowledge of lexis, especially the kind that is *gained implicitly through frequent exposure*, is not just knowledge of individual words but of *chunks of words that occur regularly in the same patterns*. [This] would increase the learner's ability to plan and execute phrase by phrase, not word by word, which a lesser exposure, say only through classroom contact, might allow. Hence, the learners in London have acquired lexical knowledge, which means they pause more naturally at clause boundaries than within them. Again, the NS data shows this aspect of L2 performance is closing in on NS patterns of fluency (2009:21-23, emphasis added).

To conclude, fluency is a complex construct, relating to aspects of rate, smoothness and ease of delivery. Assessment of fluency requires consideration of a number of measures in tandem, guided in the main by the research area of interest. Investigations into the relationship between fluency and proficiency levels, or longitudinal research into fluency and L2 acquisition require consideration of a complex of measures. Findings from quantitative data (of speech delivery, pause and hesitation phenomena) can be greatly enhanced by a consideration of qualitative data, including raters' perceptions and close examination of syntactic features, particularly clause units, and lexical diversity. Overall, there appears to be a need for studies that are not focused on establishing definitive criteria marking fluency but that investigate features that characterise fluent production.

We have noted also that consideration of psycholinguistic processing is of central importance in discussing fluency; in particular processing that is seen to be automatized. From a language learning perspective, further investigation into automaticity is of clear interest. In the next section, automaticity is presented firstly in the context of general skill acquisition and, following on from this, in the context of language production.

2.3 Automatization and skill acquisition

'Without automatization no amount of knowledge will ever translate into the levels of skill required for real life use' (DeKeyser 2001:126).

A strong link has been made between skilled performance and automatic processing. In layperson's terms we associate speed and ease with automatic behaviour; we have seen that speed and ease are qualities typically associated with fluency. Though the concept of automaticity is invoked in domains as diverse as emotion, learning and memory (Moors and

De Houwer 2006), automaticity is a quality which appears to have particular resonance with regard to language use: '[t]he ultimate example of automaticity is probably our ability to use language' (DeKeyser 2001:125). There is extensive research within cognitive psychology on automaticity with efforts concentrated on conceptualizing and confirming the mechanisms involved in automatic processing and on exploring their manner of operation. Research examining automaticity in language has tended to focus on lower-level skills, such as word recognition rather than the more complex skills of production and comprehension. Indeed Kormos states '[I]n L1 speech production research, no attempt has been made to relate theories of automaticity to models of speech production' (2006:44). There is a more limited body of empirical SLA research which attempts to operationalize the concept and to correlate it with aspects of language acquisition (for reviews see DeKeyser 2001, Kormos 2006, Segalowitz 2010). Notwithstanding the fact that empirical research exploring automaticity in SLA is at early stages, the role of automatization in SLA generally and fluency in particular has generated strong interest .This is unsurprising, since it is postulated that automatization has important performance benefits for the L2 speaker, and that it is the end state, or perhaps more probably, the 'somewhat idealised end point' (DeKeyser & Criado 2012:325), of a cognitive processing route which may be prompted by intervention.

Before proceeding with the exploration of automaticity, it is important to acknowledge there are fundamental issues regarding automaticity and language use that are not resolved. Kormos broadly adopts Level's model of speaking, outlines four concerns:

1. ...Researchers greatly disagree on what is meant by automaticity, and as a result, they often hold conflicting views of how it develops.
2. ...Language production involves different types of encoding processes – using rules and retrieving memorised lexical units from memory… it is possible that for these two types of mechanisms different theories of automatization should be applied.
3. ... Theories of automaticity, all of which consider language learning to be one type of the many cognitive processes that humans perform...have little to say to those researchers in the L1 and L2 learning who regard language a unique cognitive skill that is acquired with the help of innate capacities.
4. ...The investigation of speech production and automaticity are two separate fields of cognitive psychology with hardly any interface between them; therefore when one wants to explore automatization in oral language processing, one ventures into an unchartered territory (Kormos 2006:38).

The discussion of automaticity commences by reviewing the literature within cognitive psychology and psycholinguistics which have addressed automaticity. Influential theories and models that incorporate an account of automaticity in their description of processes underpinning fluent performance are presented. Two other constructs that emerge as significant in this discussion are those of proceduralization and chunking.

2.3.1 Defining and describing automaticity

DeKeyser (2001) surveys important studies on automaticity from the 1970s to the 1990s and endeavours to bring clarity to 'the terminological confusion and conceptual complexities that prevail in the literature on automaticity and automatization' (2001:127). Many of the studies, guided in the main by an interest in operationalizing the concept, attempted to analyse automaticity in terms of one or more features, postulating absence or presence of these features as critical in diagnosis of performance as automatic. In total, DeKeyser identifies 14 different criteria proposed (see Table 2.2), and notes disagreement among the authors as to which among the criteria are necessary and sufficient, and the extent to which some criteria can be collapsed together. Where just one criterion is asserted, it 'is one that follows from the theory [i.e. the particular theory of skill acquisition] rather than a directly observable criterion' (DeKeyser 2001:130). The most commonly mentioned features or criteria mentioned in DeKeyser's survey are: fast, capacity free, unintentional (hard to control or alter), no attention or monitoring, and result of practice.

Table 2.2 Criteria proposed in identification of automaticity
Source DeKeyser 2001

	fast	parallel	effort-less	cap-acity free	un-intentional (hard to control/alter/suppress)	result of consistent practice	little inter-ference from/with	"unconscious" (no attention, no monitoring)	always memory retrieval	OTHER (see below)
LaBerge & Samuels 1974	x					X		x		
Posner & Snyder 1975					x		x	x		
Hasher & Zacks 1979			x	x	x		x	x		no benefit from further practice
Schneider & Shiffrin 1977				x	x	X		x		
Shiffrin & Schneider 1984	x	x	x	x	x	X				
Schneider et al. 1984				x				x		
MacKay 1982	x		x				x	x		error-free, flexible
Kahneman & Treisman 1984				x	x	X				
Levelt 1989	x	x		x	x			x		
Schneider & Detweiler 1988							x			
Treisman et al. 1992						X				
Bargh 1992								x		
Cohen et al. 1992	x					X	x	x		
Anderson 1992	x			x	x	X	x			strong pro-duction rule
Logan 1988									x	
Strayer & Kramer 1990				x					x	no WM inter-ference
Palmeri 1997				x					x	
Segalowitz & Segalowitz 1993	x									no correla-tion between M & SD

One can readily see from this survey, corroborated by that of Segalowitz (2003), the challenge in establishing criteria enabling one to classify performance, or processing, as

automatic. A problem with proceeding from feature identification is that it may lead to an 'all or nothing' view of automaticity, a dichotomous view that 'automatic and nonautomatic processes represent two opposite modes of processing, each characterised by a fixed set of features' (Moors and De Houwer 2006:298). Some have questioned the value of such an approach. Segalowitz even poses the question as to whether automaticity can be considered a unitary concept, 'do automatic processes always have the same characteristics…Or does automaticity refer to a number of possibly related but nevertheless logically distinct phenomena' (2003:384). He himself gives attention to two criteria, ballistic processing and processing stability and argues the inadequacies of considering automaticity in terms of speedup alone. He contends consideration of both is necessary to understand the fluency benefit of automaticity (Segalowitz 2010). Moors and De Houwer (2006) state researchers now argue there is a need to move research away from a concern with diagnosis through the identification of specific features, and a need instead to conduct separate investigations of automaticity features.

There is also a strong interest in examining the processing involved in behaviour that already is, or is in the process of becoming, automatic. Property-list accounts may have some value in identification purposes but do not explain how particular phenomena arise, '[T]hese accounts may describe properties of performance before and after automatization, but they do not explain what underlies the transition and what gives rise to the properties of interest' (Rawson & Middleton 2009:353).

Commenting on the diversity of criteria seen to characterise automatic performance, DeKeyser (2001:130) states 'researchers have started to think of automaticity as the end result of a process of automatization (which has well-known characteristics) rather than of automatization leading up to automaticity (which has proven hard to define)'. This means in essence a focus on the changes in cognitive processing underlying performance, in particular as a result of practice. Echoing DeKeyser's words, Rawson and Middleton state contemporary theories 'conceptualize the automatization of performance in a given task in terms of how underlying cognitive processes change with practice and assume that these changes in the underlying processes produce the observable properties of task performance' (2009:354). Segalowitz (2010) notes all operational definitions of automaticity, such as those described in Table 2.2, imply greater processing efficiency. Pragmatically, he concludes, '[I]t seems reasonable enough, therefore, to say that a process is automatic, even if one cannot specify the exact nature of that automaticity, as long as one can see that the process is functioning more efficiently in some meaningful way' (2010:79). In the context of speech production, one assumes increased fluency is a measure of more efficient processing.

To summarise the discussion to this point, difficulties in attempting to define automaticity in a conclusive way have been discussed. Studies of automaticity have tended to explore one or a number of the following areas:

- Focus on individual features of automatic behaviour
- Focus on the distinctiveness of the process underlying skilled performance
- Focus on the process of automatization

A focus on the automatization process is characteristic of theories of skill development. The present research is concerned with fluency development, therefore the discussion turns to consider this process.

2.3.2 Automatic processing

Pivotal research carried out by Shiffrin and Schneider in 1977 comprised a contrastive exploration of automatic and controlled processing. Automatic processing, it was claimed, employs parallel processing, does not require attention and does not have capacity limitations. Controlled processing, however, usually employs serial processing, requires attention and is capacity-limited (Shiffrin & Schneider 1977). They concluded the positive effect for practice (in reaction time and accuracy) in their study was due to a difference in the processing activities employed in the experimental tasks, with automatic processing resulting from repetition. Indeed the role of repetition, both of input and output, and practice in fluency development has been given much attention and will be addressed in Section 2.5.

Shiffrin and Schneider's research has been highly influential in the research on automaticity. As stated, its focus was to demonstrate the activation of different processing routes in task completion, and to contrast these routes. It was not concerned with automatization *per se*. In the context of instruction for fluency, there are two strands of research arising from their work that are of interest. The dichotomy between automatic and controlled processing has been explored, questioned and elaborated on, initially with a particular focus on the question of attention (for summary see Garrod & Pickering 2007) but latterly with a focus on memory. In his survey of the research DeKeyser states '[P]erhaps the most important change…is that from theories which present automaticity as an issue of how much *attention* is given to a task to theories that present it as an issue of how *memory* is used' (2001:130). Logan's memory-based account will be presented as an important example of such an approach. The claim that memory functioning is an important component in automatic production is significant for the present research, which investigates the contribution memorised lexical chunks can make to oral fluency. In Section 2.4 there is a discussion of memory and speech production.

Secondly, where a pathway between control and automaticity is posited, mechanisms and processes held to be instrumental in controlled processes becoming automatic have been described. The progression from controlled to automatic is of central importance to the present research, which employs an instructional approach designed to facilitate automatization.

While asserting a process of automatization occurs with skill acquisition appears uncontroversial, theories differ considerably on how this process is conceptualized, the mechanisms involved and their manner of operation. Schmidt (1992) examined carefully six theories describing the psychological mechanisms underlying L2 fluency. He highlighted a fundamental point of disagreement between psychological models of skill development:

> …the relative importance of well-practiced, specific items, instances or exemplars for the development of skilled performance, as opposed to improvement in performance attributed to the increasingly skilful application of abstract rules or algorithms (Schmidt 1992:377).

Interestingly, Skehan (1998) proposes a dual system of language representation and processing, comprised of rules and exemplars. He describes three models describing fluency development:

- accelerating models: faster application of rules, e.g. models of proceduralization
- restructuring models: more efficient organisation of rules
- instance models: production based on retrieval of chunks, not rule generalization

Restructuring models as defined above are not of interest to the present discussion. They are described either as entailing a restructuring of task procedures (Cheng 1985) or as abstraction of rule-based representations from exemplars (McLaughlin 1990). Skehan contends restructuring to be important in interlanguage development but not to have a direct role in fluency of production. The present research is interested in the contribution formulaic language, accessed and retrieved holistically, can make to fluency and it seems restructuring does not incorporate a description of such a route. Skehan (1998) does consider proceduralization models to have a role in developing fluency. However, given that the native-speaker draws from a large store of exemplars, he argues there is need to incorporate an exemplar-based account in a description of fluency. The term, 'item-based' is also used, in Skehan's discussion this seems to be a matter of focus: 'exemplar' indicates the importance of input, 'item' draws attention to storage. In the literature on automatization Anderson's ACT model of cognition and Logan's instance theory of automaticity are particularly important. ACT is a rule-based theory while instance theory is an example of an item-based theory. Broadly speaking, automatization is seen by these theories respectively as more efficient use of rules, or faster retrieval from memory. In the following sections a model of

proceduralization is presented, followed by a brief discussion of instance theory. These specify different mechanisms and different processes underpinning skill acquisition.

2.3.3 ACT

A very influential example of a proceduralization model is described within ACT theory[19] (Anderson 1983). ACT is a theory of skill acquisition, which provides a developmental framework for understanding automaticity through its focus on proceduralization.

Within ACT theory, 'all cognitive behaviour is controlled by production rules [which] specify the steps of cognition' (Anderson 1992:167). ACT provides a production systems computational model[20] of the cognitive architecture, the mechanisms and processes, involved in skill acquisition. It is a fundamental aspect of ACT that the internal composition of condition-action (IF – THEN) pairs, or 'productions' can change, a change he describes as one of proceduralization.

There are three interconnected systems involved in ACT, declarative memory (episodic or semantic), procedural memory (comprised of production rules, described above) and working memory. There are three stages to skill development, these are summarised in Figure 2.1. More detail is provided below but in brief, initial knowledge employed is characterised as declarative. Through frequency of use, this knowledge undergoes a process and becomes proceduralized. After further 'fine-tuning' (DeKeyser 2001:132), the operation of procedural rules becomes automatic and autonomous.

Stage 1 Declarative
DK: relevant facts to be assembled   [work] [-ed]

Stage 2 Procedural
Composition & Proceduralization
DK → PK   *worked*

Stage 3 Automatic
Tuning of PK   ***worked***

Figure 2.2.1: Performance over practice, stages in ACT
(DK = declarative knowledge, PK = procedural knowledge)

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[19] There have been a number of versions of ACT (Atomic Components of Thought) over the years. In the context of the general discussion on automaticity and SLA, it is proposed to give an overview of ACT, using broad strokes, and with a focus on the features most frequently referred to within SLA literature. ACT, then, unless otherwise stated refers to the general outline of the theory.
[20] 'A *production system* consists of a collection of if-then rules that together form an information-processing, computer simulation model of some cognitive task, or range of tasks'(Young: 2001).

Stage 1

The first stage is called the cognitive or declarative stage. The operation of declarative knowledge is cognitively demanding. DeKeyser describes the operation as follows: '[A]ny kind of behaviour can be performed in principle by using general-purpose production rules to retrieve relevant chunks of knowledge from declarative memory, and assembling them in working memory' (DeKeyser 2001:132). The 'production sets' thereby generated describe the connection between declarative knowledge (henceforth DK) and behaviour, involving a particular DK item (an IF statement, cognitive contingency) and a procedural action (a THEN statement).

The need for rehearsal of the DK item in working memory (WM) and subsequent assembly is cumbersome; 'there are no ready-made activation procedures' (Ellis1994:388). WM has limited capacity and declarative knowledge requires attention and controlled processing. High WM load and the somewhat crude use of general-purpose productions rules means performance at this stage is typically slow and error-prone. For instance one might have stored DK that the past tense form of *work* is made up of *work* and *–ed,* and yet experience difficulty in producing the word *worked* in the flow of conversation.

Stage 2

In the associative (or compilation) stage, Anderson explores the practice effect. DK is slow to use. With practice the information is organised into more effective production sets. Two processes are involved. *Composition* entails collapsing a number of discrete productions into one, with an obvious benefit of speedup. *Proceduralization*, on the other hand, involves the building of production sets with DK embedded, therefore not requiring explicit representation of DK in WM:

> As a result of practice...chunks of declarative knowledge that are often called by a production rule can become incorporated into it; the rule can then operate faster and with less risk of error, bypassing retrieval of information from long-term declarative memory (DeKeyser 2001:132).

The process of proceduralization has been noted for some time in SLA literature. Apart from outlining a cognitive path from *knowing that* towards fluent and, possibly, more accurate performance, ACT specifies activities that stimulate proceduralization, and these activities – repetition, practice, use of examples – lend themselves readily to classroom application, they are used extensively in the design of the programme of instruction and further sections given more detailed attention to practice, in particular.

For skill development to take place a conversion into procedural knowledge, with

concomitant reduction in required resources, must occur: 'for behaviour to happen at naturalistic rates, production becomes proceduralized' (Towell 1994:204). Repetition is critical in this process. The process is detailed as follows:

> During repeated problem-solving episodes, a particular piece of declarative knowledge will occur repeatedly…When this happens, a new production rule is created that has the declarative knowledge as a pattern (its IF-part) and the executed action as its action (its THEN-part). This declarative-procedural change should result in a concurrent *reduction in verbalisation* by the problem solver. Correlatively, there is an *increase in the automaticity* of the problem-solving behaviour (Eysenck & Keane 2000:423, emphasis added).

The inherent link between procedural knowledge and behaviour is expressed succinctly by Schmidt, 'knowledge is directly embedded in procedures for performing the skill' (1992:363) and Pirolli, 'procedural knowledge specifies how declarative knowledge is transformed into active behaviour' (2007:463). Proceduralization implies a qualitative change has occurred in lexical storage of an item, that production rules are embedded with the item. This change has a strong effect on performance which will now be described.

The process of proceduralization requires time and routine use. But the benefits are considerable: retrieval is faster and there is greater accuracy in rule-operation. This is not, as in instance theory, because it is item-based but because it bypasses declarative memory. Retrieval from procedural memory is not only faster, it is also more accurate, 'chunks of declarative knowledge that are often called by a production rule can become incorporated into it; the rule can then operate faster and with less risk of error, bypassing retrieval of information from long-term declarative memory' (DeKeyser 2001:132). Towell describes the process of retrieval as follows:

> Procedural knowledge of language for language production consists of units known as *productions* and takes the form of condition/action pairs…Access to procedural knowledge is by match and execution. These are extremely rapid…and a complete production is accessed at the same time, thereby reducing the limitations imposed by working memory (Towell 1994:88-89).

Greater accuracy in rule operation does not always translate into appropriate rule use. Errors are likely to take place in the associative stage through over-application of a general rule. From a pedagogical perspective, this potential problem demands attention and may be countered, for example, by activities focused on relevant contextual analysis.

Stage 3

The final stage in AC is the autonomous stage. It involves a 'fine-tuning' of production sets. There are three aspects to this: *generalization* where new production sets continue to be formed, as the mind continues to seek and find more efficient routes, and d*iscrimination*

which counters over-generalization through restricting application of productions to certain contexts. Both of these mechanisms may be more important for their effect on accuracy rather than speed, 'changes in the representation of linguistic knowledge rather than access to that knowledge' (Schmidt 1992:265). Finally *strengthening,* where successful productions are strengthened with application, has a clear benefit for speed. It is at this point in ACT that we may talk of a production being automatic, and Anderson claims, 'To an approximation, we may say that a production is automatic to the degree that it is strong' (1992:170).

The downside to a production becoming 'autonomous' is that it may also become inflexible: 'it is recalled as a single unit and cannot be modified by the learner' (Towell 1996:89)[21]. Shiffrin and Schneider (1977) similarly noted a finding of inflexibility in relation to automatic processing. Levelt also describes this problem, '…the structure of the [automatic] process is "wired in" either genetically or by learning (or both). This makes it both efficient and, to a large extent, inflexible: it is hard to alter automatic processes' (Levelt 1989:20). The extent to which automatic behaviour is non-controllable is, of course, of importance in the context of L2 development. If only declarative knowledge is subject to conscious control, the implication seems to be that when proceduralized it is the procedure which is in control. However, it has been suggested that effectively executing complex tasks may demand an interplay between conscious and automatic processes, these will be noted shortly in the discussion on Ferman et al.'s study (2008).

ACT is a sophisticated account of practice effect and skill acquisition. It has been applied successfully to various types of learning, and Eysenck and Keane (2005) cite supporting neuroimaging evidence. These authors also identified weaknesses within the model, it has not been so successful when applied to tasks where greater flexibility was called for. ACT may not account for all of the various routes that may be involved in the course of language acquisition. However, for those with an interest in fluency development it has warranted attention. The description of skill development as reflecting integration between DK and procedural knowledge (henceforth PK) and the importance given to PK in ACT sits well with a 'rules of use' focus in language learning; and validates the need to address a classroom practice where focus, often explicit, is given to DK and it is assumed PK will 'look after itself'. Anderson describes the consequences of such a practice succinctly:

> We speak the learned language [L2]… by using general rule-following procedures
> [PK] *applied* to the rules we have learned [DK], rather than speaking directly, as we

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[21] Anderson uses the example of learning telephone numbers. I myself was much discomfited when an extra digit was added to a number I knew, and the code changed. For some time I had to go through the mental gymnastics of recalling the initial number as a chunk, prefacing it with the new code, then adding the extra digit - this to supply my home number!

do in our native language. Not surprisingly, applying this knowledge is a much slower and more painful process than applying the *procedurally encoded* knowledge of our own language (Anderson 1980:224, cited in Ellis 1994:388, emphasis added).

The description of proceduralization resulting from practice is also of interest in SLA, indeed there is a rich discussion on various aspects of the workings of DK and PK in the SLA literature. DeKeyser cites evidence in neurophysiological studies and behavioural experiments which indicate 'a shift from reliance on declarative to reliance on procedural knowledge during the learning process within the individual' (DeKeyser 2009:121). Three studies which investigate and confirm a process of proceduralization in language learning are presented. The first is conducted in an immersion context, the other two in instruction contexts.

Towell et al. (1996) employ the models of both Levelt (1989) and Anderson (1983) to describe language production and account for language development respectively. They give evidence of a student who, at the commencement of the study, showed knowledge in how to create and use dependent clauses and how to introduce new concepts with *il y a,* but who made limited use of this knowledge. After a residence period in France, 'the same resources are employed to greater effect, faster and with no "internal" hesitations' (Towell et al. 1996:112). This is one instance of improvement in a range of fluency measures they employed to analyse language changes in a group of students but it is the claim for proceduralization that is pertinent to the present discussion. Proceduralization was operationalised for them by a consideration of a number of temporal factors and a qualitative examination of syntactic patterns and lexical phrases. Commenting on the overall improvement made by the students, Towell et al. note:

> this increase in fluency is not the result of a quantitative reduction in the amount of pausing that subjects do, nor in the increase in the speed with which they articulate what they say. Rather there is an increase in the length and complexity of the linguistic units which are uttered between pauses. This suggests that what has changed *is the rapidity with which syntactic and discourse knowledge can be accessed for on-line speech production*' (1996:112-113, emphasis added).

Furthermore, and of relevance to the present research, they highlight the improvement in use of syntactic strings and sentence builders. Towell et al. account for this rapidity by proceduralization, as described by ACT, a conversion of declarative knowledge through routine use. A number of other studies corroborate similar findings for automaticity or proceduralization in language learning as a result of practice or routine use, and also as a result of instruction (e.g. Davy 2012, De Keyser 1997, de Jong & Perfetti 2011, Johnson & Jackson 1996, Robinson 1996, Segalowitz 2003).

A more recent study by Ferman et al. (2008) examines practice in the learning of a morphological rule. Participants were given extensive training (but no explicit instruction) on an artificial morphological rule. Test data was analysed for accuracy and speed (reaction time), it was found that 'practicing repeated items resulted in large gains in accuracy and speed..with no speed-accuracy trade-off' (Ferman et al. 2008:401). In addition, verbal reporting by students was used to assess the contribution of implicit and explicit processes. The findings are interesting, and suggest, according to the authors further stages in acquisition following on from initial proceduralization, and interplay between DK and PK:

1. Proceduralization
Practice-related gains in performance speed and accuracy in production and judgement with no speed-accuracy trade-off.

2. Generalization
Both phonological and semantic. The authors argue semantic generalization, without explicit instruction, testifies to the establishment of DK by some participants.

3. Further phase of proceduralization
Robustly attested for in speed and accuracy by those who had established declarative knowledge. The authors postulate this was due to a proceduralization of routines, and comment, '[A] process, whereby declarative knowledge may turn into a set of specific routines, can be conceptualized as part of the top-down proceduralization (automatization) of "high-level" (intellectual) cognitive skills' (Ferman et al. 2008:405).

Different results for phonological and semantic knowledge suggest to the authors that phonological learning was implicit and retained as procedural memory, that semantic learning was explicit and used declarative memory, and that dynamic interaction between these memory systems was implicated in skills acquisition and fluency gains. These findings seem to be corroborated by other research on the learning of dynamically complex tasks, reported by Segalowitz (2003), which 'indicated that automatic processing plays a role both early and late in training… that executive control processes increase in importance as skill develops and that there is an interactive relationship between controlled and automatic processes' (2003:396). DeKeyser points out that in ACT-R, a later version of ACT, 'complex production rules are compiled by analogy to complex examples rather than through composition of simpler production rules' (2001:132). From a SLA perspective, such findings are of interest in light of concerns about automaticity and fossilization or inflexibility of use. Perhaps the important finding from a pedagogical perspective is that conversation or spoken

narrative construction can be presented as a task comprised of relative simple routines, but that there may always be an element of unexpected complexity involved. The learner will, in such circumstances, need to be practised in drawing on creative language use where required or, alternatively, make effective use of routinized strategies.

De Jong and Perfetti (2011) researched the effect of repetition in oral fluency development. The repetition activity employed was Nation's 4/3/2 procedure, where a planned narration is delivered three times within shorter time periods (discussed further in Section 4.6). They employ fluency measures which Towell et al. (1996) argued, in combination, could serve as indicators of proceduralization, these measures are presented in Chapter 5. Using these measures, they found evidence of proceduralization. Furthermore, students who repeated words more during training showed the greatest improvement in phonation time ratio and length of pauses, even though few repeated words were used in the immediate post-test. They propose,

> [I]t seems likely, therefore, that proceduralization was not a specific lexical effect; rather, the effect may have been in the repeated use of sentence structures with those repeated words, thus leading to proceduralization of phrase building (de Jong & Perfetti 2011:560).

This finding is of interest to the present study which is interested in the proceduralization of formulaic sequences and employs activities to prompt phrase noticing in the course of treatment.

Bygate, referring to Abbot's (1981) review of oral activities in the classroom, notes 'a pedagogical focus on proceduralization had become rooted' (2009:423). Practice has indeed a long tradition in SLA, and we have seen that practice or repeated use is a driver of proceduralization. In Section 2.5 the broad outline of such a pedagogical focus is discussed within Skill Acquisition Theory.

2.3.4 Instance theory

As noted in Section 2.3.1 ACT is an example of a rule-based theory, whereas instance theory is an example of item-based theory. Within this theory automaticity is described as memory retrieval, 'performance is automatic when it is based on single-step direct-access retrieval of past solutions from memory' (Logan 1988:494, cited in DeKeyser 2001:134).

Instance theory views automatization as a replacement of rule-based, or algorithmic, performance by memory-based performance. Single-step retrieval, from a build-up of instance representations, is responsible for fast retrieval from memory: 'automatic processing is based on single-step direct-access retrieval of prior solutions from memory' (Logan et al.

1999:166). Logan's theory diverges from standard information processing views; as opposed to cognitive processing becoming more efficient, he posits a more efficient process simply *replacing* a less efficient one. Computing an algorithmic solution in time is slower than retrieving an instance of the solution which has been stored in memory and strengthened by frequency. Palmeri (1997) proposes replacing *instance* (which is activated only when the identical token is required) with *exemplar* which is activated by similarity. Exemplar systems are seen by Skehan (1998) as comprised of formulaic items, which are not accessed through analysis but are stored as ready-made chunks. Language processes are seen by Skehan to draw from two systems, one analytic and rule-based, the other formulaic and exemplar-based. Wray's dual-model of language processing, presented in Section 3.5, is similar in many respects.

What relevance does ACT and instance theory have for the current research? DeKeyser (2001:129) concludes that, while comparing the relative merits of instance theory with ACT is difficult in accounting for automaticity, the incorporation of DK within ACT seems to give the theory more scope over the stages of skill acquisition. It is also of relevance to a classroom context where paucity of input may not suffice to strengthen exemplars adequately for 'single-step retrieval' and where learning typically is fostered through analytic procedures. With regard to formulaic language, a theory based on exemplars (such as instance theory) provides a strong account of the phenomenon. However, again giving consideration to the classroom context, proceduralization may denote a route to formulaicity. While the lexicon is generally considered declarative, proceduralization refers to:

> …the embedding of factual knowledge into productions so that the products of frequently executed productions can be retrieved directly from memory [presumably procedural] and declarative knowledge does not have to be activated in working memory (Schmidt 199263).

Skehan (1998) describes exemplars as providing speakers with ready-made chunks. The embedding of DK into procedures also provides the speaker with a proceduralized chunk. Within SLA research, theories exploring developmental changes in the cognitive processes underlying skill development have generated more interest than instance theory and reference to ACT and proceduralization underpin a number of the empirical studies germane to our own study, presented in Chapter 3. In the context of understanding fluent performance, automaticity has remained a very germane and productive construct; in the context of skill development, proceduralization appears to describe an important process involving interplay between declarative and procedural memory systems and a frequency effect.

2.4 Automatization and language fluency

2.4.1 Introduction

> A speaker with a normal speech rate produces some 150 words per minute… A normal, educated adult speaker has an active vocabulary… of about 30,000 words. A speaker makes the right choice from among these, 30,000 or so alternatives not once but in fluent speech, continuously two to five times per second. There is probably no other cognitive process shared by all normal adults whose decision rate is so high. Still, the error rate is very low (Levelt 1989:199).

Naturally-occurring speech is linear and occurs in real time. Written language is linear, in its final version. In writing we may delete at will, while speech only permits repair work. Naturally-occurring speech is generally 'on-line', spontaneous, to a greater or lesser degree. These factors create a considerable cognitive processing pressure for the speaker. Speaking tends to be interactional rather than transactional, in the sense that there is an orientation towards the other in a conversation quite different to the orientation towards the reader. Speech also differs in its physicality. Speech is made up of human sound generated in time, it is characterised by features such as pronunciation, speech rate, pitch, pause, rhythm, stress and intonation, along with 'ums' and 'ers'! Speech may be uttered in environments as diverse and challenging, as a crowded elevator and a doctor's waiting-room. These diverse conditions put cognitive pressure on the speaker. Yet we typically cope with these pressures. We speak with fluency, to a greater or lesser extent.

Automatization of cognitive processes is contended by a variety of researchers to be central to our ability to speak fluently, notwithstanding the pressures indicated above (Anderson 1976, Kormos 2006, Levelt 1989, Schmitt 1992, Segalowitz 2006). In brief, the core argument is that '[F]luency is automaticity of psycholinguistic processes' (de Jong & Hulstijn 2009). We noted in Section 2.3 DeKeyser's (2001) suggestion that the process of automatization is more accessible to research than the condition of automaticity. The process by far most liked to automatization is that of proceduralization. Indeed, it can sometimes appear within research that the two are seen as roughly synonymous, or that they are distinguished only in terms of the researcher's focus: whether this is a description of a *process* necessarily entailed in automatization, or *automaticity* itself.

A central tenet of this research is that learners who continually have to rely to a large extent on controlled processes and declarative knowledge for comprehension and production may be limited and constrained in their progress in a second language, in particular with regard to gains in fluency. Broadly speaking, the argument is made that declarative knowledge 'is generally slower to use and requires more attention and cognitive resources than procedural knowledge, '[B]ecause procedural knowledge is processed fast and in parallel with other

processes and because it puts less of a burden on the limited resources of working memory, it is more suitable for fluent speech' (de Jong & Perfetti 2011:537).

Thus far, automatization has been presented within a discussion of more general skill acquisition. Speaking is a complex, higher-order cognitive process and for the learner speaking is a demanding activity. A detailed model of speaking, one which is highly influential in the research literature, is provided by Levelt. Locating the automatization process within such a model can give further insight into the role of automaticity and speech fluency. The model will be presented guided by this concern. This is followed by an account of automaticity provided by a description of a chunking process in working memory,

2.4.2 Levelt's 'blueprint'

Levelt's (1989) 'blueprint' represents a mature L1 speaker but has been modified for the L2 speaker by de Bot (1992). It is highly influential in the research literature. Segalowitz states 'Levelt's "blueprint"... provides, in graphical form, a summary of what could be reasonably called *the consensus view* of the linguistic, psycholinguistic, and cognitive issues underlying the act of speaking' (2010:8, emphasis added). The model incorporates a full and thorough account of speech: '[T]he unique feature of the model is the integration of the processes of acoustic-phonetic encoding and sentence processing into one comprehensive system, and its richness in detail' (Kormos 2006:7). De Bot (1992), Pienemann (1989) and Kormos (2006) have adopted and adapted Levelt's model to describe L2 speech production, for example to account for a bilingual lexicon and for rules stored as declarative knowledge. Dörnyei and Kormos (1998) present a comprehensive examination of L2 problem-solving mechanisms using Levelt's model. Segalowitz (2010) provides a useful commentary on De Bot's (1992) adaptation with the purpose of identifying areas where L2 fluency challenges might arise – and concludes that such challenges might arise at every stage in the processing involved from intention to articulation.

Levelt's model of speaking (1989, 1999) is linear and modular. His famous 'blueprint for the speaker' (1989:8) delineates the processing components for comprehension and production, and describes these as basically autonomous units that relate in a production-rule system, with rules in given conditions executed. Levelt describes speech as proceeding in a predominantly linear manner from conceptualization (of message) to formulation to articulation, a standard view of the speech arc among researchers according to Kormos (2006).
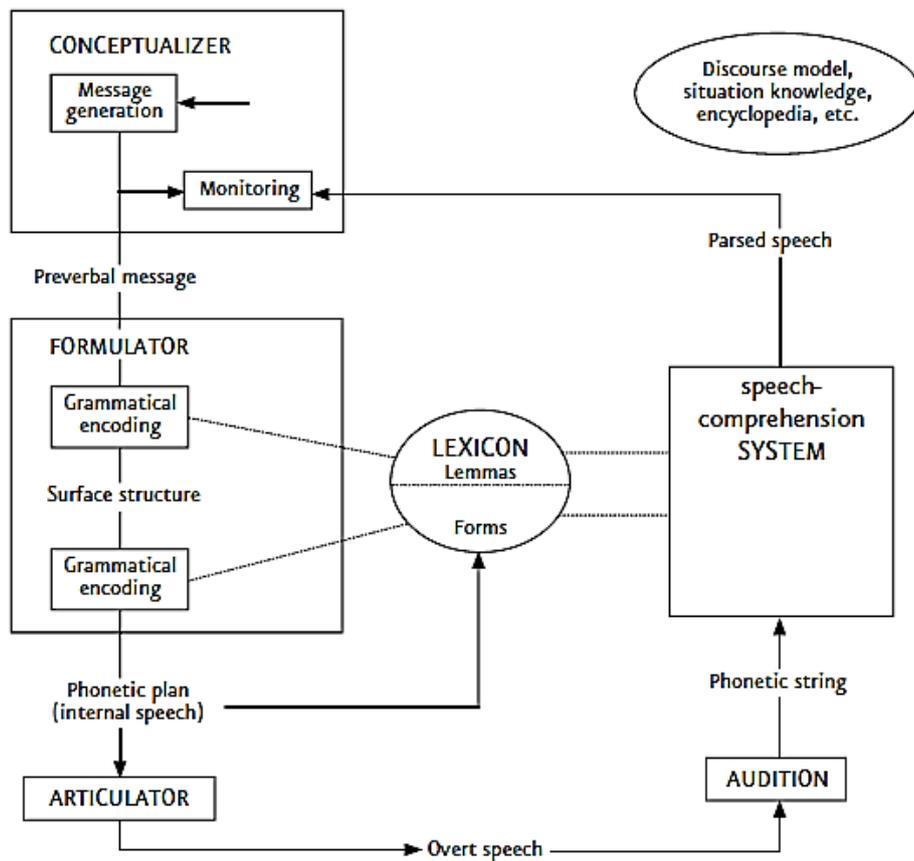
Figure 2.2 Levelt's model of speaking

Levelt's model (see Figure 2.2) is comprised of five procedural components:

1. The Conceptualizer; where intention is given pre-verbal form

2. The Formulator; where lexical selection triggers grammatical and phonological encoding

3. The Articulator; where the phonetic plan of the internal speech construct is executed

4. The Audition component; extracts phonetic strings from audio

5. The Speech Comprehension system; interprets grammatical and semantic meaning

The model also contains two declarative knowledge stores:

1. Knowledge of external and internal world, including context of interaction and discourse model. This feeds into conceptual preparation.

2. The lexicon. This feeds into grammatical and phonological encoding.

The following processing stages are entailed in the passage from meaning to sound: the conceptual content of an utterance is planned and encoded as a propositional message, propositional messages are then formulated, grammatically and phonologically encoded, finally the messages are given overt expression through phonetic encoding. The lexicon, as is the standard view, is declarative. It mediates between the preverbal message and formulation:

The preverbal message triggers lexical items into activity. The syntactic,

morphological, and phonological properties of an activated lexical item trigger, in turn, the grammatical, morphological and phonological encoding procedures underlying the generation of an utterance' (Levelt 1989:181, cited in Singleton 1999:108).

Dörnyei and Kormos (1998:353) describe how for the preverbal message to be available to the formulator, 'it must contain lexicalizable *chunks*'(emphasis in original); declarative chunks, presumably which have to be encoded for production. In ACT, this roughly corresponds to stage 1, the declarative stage where chunks are assembled in what seems to be a rather cumbersome way in working memory. Levelt's model describes a more efficient process.

Speed and general accuracy of production have to be accounted for by any psychological account of speech production. The speed of language production is facilitated by three features of the model:

1. Incremental processing. The processing components are relatively autonomous. Once a chunk has been processed at one stage, it is passed on and that component will then start working on the next chunk, '[A]s a consequence, the articulation of a sentence can begin long before the speaker has competed the planning of the whole sentence' (Kormos 2006:8).

2. Parallel processing. Processing is serial *and* parallel. The different processing components work simultaneously.

3. Automatized processing. Apart from the conceptualizer, the production mechanisms are automatized.

In considering accuracy in fluent speech production there are two aspects of Levelt's model that warrant closer attention; the process of lexical encoding and automatized processing. Levelt postulates both DK and PK are activated in the process of speaking. PK is the knowledge, 'the inner workings' (Levelt 1989:72) of the autonomous processing components and, as in ACT, takes the format IF X THEN Y, or condition/action pairs. PK is knowledge of how to execute a process in order to achieve a goal. While each processing component contains procedural knowledge, '[E]ach functions by accessing different kinds of declarative knowledge' (Towell et al. 1996:85). DK is propositional, knowledge *that*, and in Levelt's model comprises of the items in the various knowledge stores noted above. Together these stores contain the declarative knowledge held by Levelt to be required in speech production.

It is *procedural knowledge*, including the encoding rules of syntax and phonology, which is automatized in the native speaker (automatized not as a final state of a process but inherently), and which allows for the speed of production that is seen by many as a

significant characteristic of fluent speech. If it is the case that the more a production is automatized the faster it will be executed, this also means the more a production is automatized the less attention the speaker has to give to it, thereby freeing up attention for matters requiring speaker control. Speech calls on both declarative and procedural knowledge but it is the automatized operations which are an important factor in facilitating smooth, accurate and fast delivery of speech.

However, while this modular processing is automatized, Levelt (1989) describes a monitor in the model which receives feedback before the preverbal message is encoded, before the internal speech construct is articulated and after articulation. Garrod and Pickering (2007) employ a graded notion of automaticity to the separate processing components of Levelt's model and conclude it contains a mixture of both controlled and automatic processes, with processes at the conceptualising and lexical access state more controlled than others, but with no processes completely automatic.

Automaticity in Levelt's model is instanced when processes are executed 'without intention or conscious awareness [and] run on their own resources' (Levelt 1989:20). Apart from conceptual preparation, he claims the other components are 'largely automatic' (1989:21). Levelt states 'the structure of the [automatic] process is "wired in" either genetically or by learning (or both)' (1989:20). Notwithstanding the reference to learning, Levelt does not describe a process in which automatized productions may be created.

The blueprint of the speaker, then, is a snapshot in time, and doesn't deal with acquisition issues or the development of proficiency over time. This is of some regret from an SLA perspective. With regard to L2 acquisition, for example, viewing encoding as an expression of procedural knowledge is interesting but raises question. While Towell et al. (1996) in their study on the development of fluency in learners use Levelt's model 'to provide the descriptive base for the sub-processes of language production' (1996:84), they note the model has 'nothing to say about where this knowledge [made explicit in language production] comes from or how it is given procedural form' (1996:87). To account for *development* in learners the researchers employed a framework provided by Anderson, and combined it with Levelt's model, this enabled them to postulate with more precision the area where proceduralization took place.

Skehan (2009) acknowledges difficulties with the model in the SLA context, particularly due to differences with regard to L1 and L2 lexicons 'in terms of size, elaborateness and organization' (2009:529). He notes this can cause disruption in modular parallel processing

in L2, who may resort to more serial processing with a potential disfluency effect. However he maintains the model provides a useful analytical tool, 'to give us a handle on how second language speakers change as their proficiency grows, and the ways in which they come to approximate first language speakers (2009:529). He views as particularly valuable the separation of speech production 'into more conceptual areas and into more linguistic areas' (2009:529) when looking at task effects on production:

> Essentially the framework allows us to distinguish between factors that address the complexity of tasks, since these relate more to the Conceptualizer stage, and factors which affect the way expressions are actually built, since these will impact more on the Formulator stage (2009:529).

There are some difficulties in the account of the lexicon. As noted by Singleton (1999) the separation of encyclopaedic knowledge from lexical knowledge is problematic. It could be argued that knowing a word *entails* encyclopaedic knowledge of the word in use. Knowing the precise meaning of a word, for example, may entail reference to pragmatic or discourse context, as might be envisaged within instance theory where representations are derived from contextualised use. In Levelt's model pragmatic and discourse knowledge is activated at preverbal level. His description of lemma content, however, makes no reference to such aspects. This suggests an operational disconnect, the preverbal message incorporates declarative encyclopaedic knowledge but the lemma activated within the lexicon is specified in narrow semantic (as well as syntactic) terms.

It is also argued the description of the mental lexicon as comprised of DK only is problematic as it does not account for lexical creativity, which entails PK (Singleton 1999). Lexical activation is accounted for in the model *solely* in terms of preverbal triggering, excluding the possibility that other prompts might stimulate lexical activation. In conversation, for example, verbal output often appears to be 'triggered' in a semi-automatic manner by a partner's speech, for example in echoing (Zhang 1998). Prompting might indeed be internal, as when retrieval of an item may prompt retrieval of an alliterative or emphatic item, *baking hot, babbling brook*. In the process of delineating the various elements, schematic boundaries perhaps became too defined, overly restricting the interface between the elements (Singleton 1999). For example, while speech may utilise various types of knowledge, asserting the existence of various knowledge *stores* excludes the possibility of a more diffuse type of *storage*.

The lexicon is comprised of discrete lemmas and forms, which specify morphological and phonological information. Sprenger et al. (2006) incorporates an account of idiom storage within a hybrid model; idioms are labelled 'superlemmas', 'a representation of the syntactic

properties of the idiom that is connected to its building blocks, the simple lemmas' (2006:176). Pre-empting a discussion in Chapter 3, this implies productions of idioms or phrasal expressions follows the same processing route as non-idiomatic language, which would constitute a relatively weak view of formulaic language processing. Strong versions assert an inherently distinct processing route, and some linguistic and psychological accounts of these are presented in Chapter 3.

It may be moot to represent the model as a blueprint for an efficient engine, a machine where cognitive function is binary, symbolic and logical (Taylor & Taylor, 1990). However, there are fundamental criticisms of the structurally static conceptualization of the mechanisms held by Levelt to be involved in speech production. Some of these involve a rejection of a modular, symbolic description of language production, and offer an entirely different understanding of cognitive processing, for example theories based on connectionism.

While not questioning the architectural specifications of Levelt's model, Segalowitz (2010) details studies in neuroimaging on fluency which suggest:

> perhaps there is a need to question the assumption about how fluency is reflected in a structurally static system and ask instead whether fluency is associated with some dynamic aspect of the organization of neurocognitive systems underlying L2 production and reception. Perhaps cognitive fluency is realized in the brain through improved *organizational* efficiency, not simply through faster or more stable processing of mechanisms without reorganization of the network (Segalowitz 2010:14, emphasis in original).

Segalowitz (2010) is satisfied to accept Levelt's model as a description of production in time, but suggests that the model needs to be incorporated within a framework establishing connections between it and other components which impact on production, namely a dynamic systems framework. From an L2 perspective, he proposes the following additional components:

- perceptual and cognitive experiences, e.g. input frequency
- interactive communicative context
- motivation to communicate

Indeed, these components have already been noted as pertinent in the discussion of learning context of the typical student of Irish, in Chapter 1.

A 'snapshot in time' has its merits, notwithstanding the limitations noted. Levelt's model is a coherent, comprehensive description of cognitive elements involved in speech production. It is premised on an established principle in information processing, that of production rules. It describes a systematic relationship between various types of relevant knowledge with

processing mechanisms, a relationship viewed as a dynamic interplay between DK and PK (DK activation – PK encoding). Levelt accounts for the speed and accuracy of natural speech by specifying the *mechanisms* involved in speech production, and by incorporating *incremental, parallel and automatized processing* into the model. The account of automatization of procedures and of the centrality of the mental lexicon, in particular, is of interest in the context of oral fluency. However, the account of the lexicon appears to be weakened in not incorporating any procedural knowledge, and in providing a rather limited account of phrasal expressions, a significant component of the linguistic repertoire (see Chapter 3).

We have met with various accounts for automatization, respectively in skill learning (ACT), where speed is an effect of faster execution of proceduralized knowledge; in instance theory, where speed is an effect of faster (direct) retrieval from the memory; and in a model of speech production (Levelt's), where speed and accuracy are an effect of key mechanisms being proceduralized. In any account of cognitive processes underpinning learning, it is essential to incorporate a description of memory. Two questions guide this discussion. What components of memory are particularly relevant in language learning, what is known about their processing? And how does automatization feature in this account of memory functioning?

2.4.3 Phonological short term memory

The working memory (WM) model of Baddeley and Hitch (1974), '[T]he most widely accepted conceptualization of short-term memory today (Kormas & Sáfár 2008), is a multicomponent model. As the term indicates, working memory does not just have a storage function but plays a dynamic role in cognitive activities, Baddeley describes WM as 'a limited capacity storage system that underpins complex human thought' (2007:6-7). Baddeley's WM model has been revised many times over the years but in its outline, it is comprised of three components.

1. The central executive. A supervisory system, this directs attention, information flow and planning; and coordinates two subsystems, described below.

2. The phonological loop. This functions to manipulate and retain speech.

3. The visual-spatial sketchpad. This is responsible for visual and spatial information.

Clearly, the component of most relevance to language learning is the phonological loop, or phonological short term memory (henceforth PSTM). This component also happens to be the most extensively researched component, including studies on its role in SLA (Baddeley et al. 1998, Kormos & Sáfár 2008 for review).

The phonological loop itself is comprised of two components; a phonological store holds phonological traces for a few seconds, after which it fades; and an articulatory rehearsal process which refreshes decaying contents of the phonological store. These components, store and rehearsal, have been likened respectively to an inner ear and inner voice (Baddeley 1986). Both components have limited capacity. The rehearsal process, saying the items to yourself, may be subvocal or overt and takes place in real time, 'resulting in a limited span of immediate memory (after a certain number of items, the first one will fade before it can be rehearsed) (Kormos & Sáfár 2008:262). This description fits well with our everyday experience, we repeat to ourselves directions and instructions as information is delivered. PSTM span is the ability to repeat phonological sequences. Though PSTM capacity has been operationalized and measured by a variety of measures, 'the common underlying focus is on the holding mechanisms that keep phonological information available for a short period of time in order to make subsequent, more elaborate processing possible' (O'Brien et al. 2007:559). The operations and effect of the rehearsal process would seem to be pivotal in this.

Robust evidence for the operations of the phonological loop has been provided by tests such as phonological similarity and word length effect (Baddeley 1986). The phonological similarity effect describes serial recall as worse for similar items than dissimilar. Word length effect examines the effect of asking people to recall longer items and confirms a decrease in memory span with longer words. Rehearsal, as noted above, takes place in real time, if rehearsal takes more time this means more decay will occur. Though various interpretations have been offered for results from these and other tests, the tests consistently provide strong evidence for the workings of the phonological loop (Baddeley 2009).

What more general function, then, does this component serve? As Baddeley wryly put it, '[H]as evolution thoughtfully prepared us the invention of the telephone' (2009:44)? Far from being of trivial importance, Baddeley proposed the phonological loop might assist language learning. This hypothesis was initially tested exploring foreign language learning on an adult with a phonological loop deficit and the results supported the hypothesis. Further testing using articulatory suppression, word length or similarity manipulation with groups showed stronger negative effects for foreign language words than native language words, further corroborating the hypothesis (see Baddeley 2009:45-46 for test details). Baddeley decided to explore a possible language acquisition function with children, specifically:

> that the function of the phonologically loop is not to remember familiar words but to help learn new words [serving] to provide temporary storage of unfamiliar phonological forms while more permanent memory representations are being constructed (Baddeley et al. 1998:160).

Data showed strong positive correlations between capacity in nonword recall and vocabulary knowledge. Further studies, controlling for variables and using different methodologies, indicated a causal relationship. Examining data from a range of studies, the authors conclude the evidence:

> indicates that the phonological loop mediates the long-term phonological learning involved in acquiring new vocabulary items. This role appears to be particularly significant when the novel phonological forms to be learned have highly unfamiliar sound structures (Baddeley et al.1998:164).

.

In the same paper, similar evidence is reported for adults. When learners were presented with phonological forms for which there were no similar L1 forms (in LTM, presumably) to support them, they 'were forced to rely solely on the more fragile phonological loop system to provide the necessary temporary storage…while more stable long-term phonological representations were being constructed' (1998:166). Interestingly, this suggests that the link between WM and long-term memory is not unidirectional. O'Brien et al. note'[A] more recent addition to the model [Baddeley's WM model] is an episodic buffer that integrates information originating from the slave systems with information from long-term memory' (2007:559). Kormos and Sáfár (2008:263) cite further evidence 'which indicates that long-term knowledge also influences processing in phonological short term memory'. Ellis (2001) elaborates a theory of language acquisition incorporating a similar description of interaction, this theory is discussed in Section 2.4.4.

While there is strong evidence that PSTM is related to children's L1 vocabulary knowledge and their ability to learn new words, there is now a growing number of studies examining PSTM relationship with L2 development (see Martin & Ellis 2012 for review going back to 1988), with aspects of vocabulary, grammar and fluency development explored. A number of these studies are of interest to the present research and will be presented in brief. However, O'Brien et al. note that 'with regard to speech production…there have been only a few investigations into the role of PM [phonological memory] in L1 speech' (2006:378). From a review, they conclude PSTM is involved in certain aspects of L1 speech production, 'namely in utterance length, and grammatical and semantic complexity' (2006:378). In their paper, returned to below, they investigated the role of PSTM in adults in speech production.

Ellis & Sinclair (1996) investigated the effect of rehearsal of multi-word utterances on acquisition of phrases and on syntactic mutation. Using a control group, they found phonological repetition resulted in superior performance in:

a) receptive skills in terms of learning to comprehend and translate FL (foreign language) words and phrases

b) explicit metalinguistic knowledge – the phonological changes of mutation

c) acquisition of the FL words and phrases

d) accuracy in FL pronunciation

e) grammatical accuracy and fluency (mutating/not-mutating as appropriate)

Ellis & Sinclair (1996) explain these findings using the theoretical construct of chunking. This theory is presented in Section 2.4.4. The authors suggest the positive findings for grammatical accuracy indicate repetition leads to:

> the consolidation of long-term representations of… word sequences. Subjects could produce these forms better as a result, and they appeared to be more nativelike in that they could accurately produce grammatical utterances as lexicalized phrases (1996:246).

The reference to a 'consolidation of representations', based on repetition in input and production of exemplars, reminds us of processes in ACT and instance theory, described in Section 2.3, and seen to contribute to automatization. Ellis and Sinclair (1996:247) propose increased use of long-term sequence storage enhances the functioning of such sequences as labels. Automaticity of access to these sequences also contributes to fluency benefits, a theme central to Chapter 3. Where representations are consolidated one can readily appreciate how this would contribute to fluency of cognitive processes underlying an utterance (Segalowitz 2010:48). As pronunciation was the only prosodic feature examined by Ellis and Sinclair (1996), it is not possible to speculate whether utterance fluency also benefitted from the treatment.

Kormos and Sáfár (2008) investigated the relationship between PSTM capacity (measured by nonword span) and L2 performance across a range of language skills, comprehension and production. With regard to speaking, they refer to a study (Speciale et al. 2004) which examined the role of two variables, phonological sequence learning and PSTM, in vocabulary learning. Initially, these variables contributed independently. However,

> As students progressed in language learning, they began to recognize the phonological regularities of the language, and vocabulary knowledge contributed to increasing the efficiency of short-term phonological storage as well as the learning of further sequences (Kormos & Sáfár 2008:263).

These findings are interesting from a pedagogical perspective, suggesting a possible benefit for highlighting phonological regularities, for example through noticing activities. In their own study, PSTM capacity was not found to have a significant role at lower proficiency levels for beginner students but to correlate highly with, among other skills, speaking (in range of vocabulary and fluency) and L2 overall competence in pre-intermediate students. The overall high scores for accuracy in the pre-intermediate students suggest to the authors

'already proceduralized or perhaps automatized grammatical processing…[they continue] what differentiates among them is most probably the knowledge of vocabulary and the ability to retrieve words quickly and efficiently' (Kormos & Sáfár 2008:268), a hypothesis they find borne out by correlation between high scores for range of vocabulary and PSTM results.

The authors discuss further the importance of 'ready-made lexical units or formulae'. The following comment brings together key concerns of the present study: formulae, storage, and fluency:

> The ability to form larger units from smaller constituents, that is, to chunk has been supposed to be affected by working memory capacity…is seems quite logical to suppose that the effect of phonological short-term memory capacity that manifests itself in the oral fluency score of the more advanced participants is also due to student variability in the ability to form linguistic chunks (Kormos & Sáfár 2008:269).

'

The more general picture, however, is that 'that phonological short-term memory capacity plays a more important role in the case of less proficient speakers and its effect diminishes with the development of L2 competence' (Kormos & Sátár 2008:269). A range of temporal fluency measures were employed in O'Brien et al. (2007) to assess PSTM and oral fluency development over 13 weeks. Their findings, of positive correlation, were similar to those for pre-school children. Kormos & Sáfár (2008) postulate their own conflicting findings reflect an emphasis in school on explicit instruction at beginner level.

Commenting on their finding of PSTM correlation with proficiency, O'Brien et al. suggest,

> Perhaps phonological memory plays a significant role when language production is effortful and a lesser one when language has become automatized… At earlier stages of L2 learning, phonological memory might constrain the amount of speech produced: L2 learners who are able to retain only a few items in short-term memory might be limited in the amount of speech they are able to generate (2007:577).

The authors therefore propose that L2 oral fluency may be contributed to by 'the ability to retain and imitate longer L2 utterances' (2007:577). O'Brien et al. (2006), as noted earlier, investigated the relationship between PSTM and aspects of lexical, grammar and narrative abilities and found similar evidence of correlation with proficiency. This study did not investigate fluency, but noted narrative gains (measured by use of certain grammatical forms and lexical items) correlated highly with PSTM of lower ability students. At higher proficiency PSTM correlated post-test with better use of function words and of subordinate clauses. Commenting on the lack of relationship between PSTM with higher ability students and narrative gains, they suggest this may be due to PSTM having facilitated acquisition of complex grammatical templates in earlier stages of L2 acquisition:

…and hence, essentially lexical abilities that afford the generation of more complex utterances. Speidel (1989, 1993) proposed that children acquire syntactic complexity in their L1 by imitating adult models. The heard phrases are held initially in PM and subsequently transferred into long-term memory. Children eventually construct correct syntactic speech from the corpus of templates stored in long-term memory. Good PM skills are required to imitate adult utterances, especially if they are longer or more complex (O'Brien et al. 2006:378)..

The three studies presented confirm a general correlation between PSTM and L2 development, findings generally corroborated by relevant SLA research (see survey in Martin & Ellis 2012), explained mainly as an effect of the construction of stable representations. We noted earlier the claim that it is not simply a matter of representations of *discrete items* that is facilitated, but a matter of *chunks* (Ellis & Sinclair 1996). Indeed, it might be argued that it is as a result of its role in developing representation of chunks that PSTM contributes to language automatization.

2.4.4 Chunking theory

It was noted earlier that Ellis and Sinclair (1996) locate the role of PSTM in language learning within a chunking model of learning. Chunking processes in perception, learning and expertise have been investigated over many years since Miller (1956) proposed it was the number of *chunks* that could be recalled, not items, which limited memory capacity. There are two important characteristics of chunking that have led researchers to claim that chunking has a central role in learning and performance (Servan-Schreiber & Anderson 1990, Chase & Simon 1973, Gobet et al. 2001, Newell 1990). Firstly, a chunk is a unit of memory organisation which is formed by combining smaller units of information, which aids fast retrieval. Secondly, chunking happens recursively, chunks themselves become part of larger chunks, thus developing efficiencies in organisation of representations.

Chunking items together is driven by sequences in input, sequences of sound, shape, form, and frequency. When features are found to recur together, associations are built between them and these connections are formalised as a single cognitive representation. This obviously facilitates faster retrieval and speedup in performance. But the chunking process doesn't stop and higher-level chunks are established in turn, '[C]hunking implies the ability to build up such structures [chunks] recursively, thus leading to a hierarchical organisation of memory' (Newell 1990:7, cited in Ellis 2001), it is this ongoing recursive process which is seen to be central to both learning and performance.

Newell (1990) claimed that, apart from being a central feature of memory, chunking could be a central feature of practice effects. Chunking theory accounts well for the power law of practice which describes the rate of acquisition for many skills, i.e. improvement gains with

practice diminishing over time. Put simply, chunking generally leads to faster performance by reducing the number of items in the *input* requiring attention and processing and by facilitating faster *retrieval* times from Long Term Memory (LTM). Higher level chunks are less frequently encountered in the environment, required less and are therefore less beneficial.

According to Gobet et al. (2001), there are two broad views on how chunking occurs,

> …the first assumes a deliberate, conscious control of the chunking process (*goal-oriented chunking*), and the second a more automatic and continuous process of chunking during perception (*perceptual chunking*) (2001:236).

The first process might characterise an approach taken in a formal learning context. While controlled and deliberate, retrieval is fast and accurate. One might postulate that in routine contexts the production would become automatic.

Proceduralization in ACT involves combination, the incorporation of a 'chunk' of DK with a procedural rule, and also a combination of smaller production rules into larger rules. Chunking was later seen by Anderson to have a strong role in inductive learning. Schmidt (1992) describes a study on artificial grammar learning conducted by Servan-Schreiber and Anderson (1990) and concludes it gave:

> …strong evidence for the hypothesis that the primary mechanism responsible for learning was chunking and that grammatical discrimination after training was based on the degree to which representations of new strings could be built from the collection of learned chunks' (Schmidt 1992:374).

Apart from storage facilitating fast retrieval, Newell and Simon (1972) claim chunks may comprise the *conditions* of productions, the IF component in an IF…THEN pair. Gobet (1998) explains and illustrates:

> …each familiar chunk in LTM is a condition that may be satisfied by the recognition of the perceptual pattern and that evokes an *action*. Productions explain the rapid solutions that experts typically propose and offer a theoretical account of "intuition"…The fact that experts in many domains… use forward search when solving a problem, while novices work backwards, is taken as evidence that experts make heavy use of productions based on pattern recognition' (1998:118, emphasis in original).

Thus a *pattern* in the environment seems to function as a *pointer* to a chunk. One is reminded of Levelt's description of lemmas 'pointing' to their relevant grammatical encoding.

The research presented on vocabulary learning and PSTM is consistent with chunking

theory. Research already presented on proceduralization incorporates reference to chunking. Ferman et al. (2009), like Anderson (1990), suggest that improved performance in the learning of a morphological rule in their study reflects proceduralization possibly involving chunking mechanisms:

> [W]e propose that the proceduralization of declarative linguistic knowledge, and the previously established procedural sub-routines, was accomplished through processes analogous to those subserving the proceduralization of non-linguistic declarative knowledge such as 'chunking' (2009:405).

De Jong and Perfetti (2011) are interested more generally in speech fluency, as opposed to grammatical competency, but likewise postulate a connection between proceduralization and chunking. Interestingly, they suggest chunking takes place on two fronts, lexical and procedural. Referring to proceduralization and language use they suggest:

> …the retrieval speed of words and phrases increases with repeated practice…the creation and strengthening of new chunks can lead to the emergence of formulaic sequences. Language use can also lead to the construction of new production rules and the collapsing of production rules into larger ones' (2011:528).

This hypothesis is revisited in the discussion of formulaic sequences in Chapter 3. More generally, Schmidt comments on language and discourse organization and contends that the hierarchical organisation of chunking:

> …is appropriate for modelling speech production, in which an utterance may consist of higher level chunking into clauses and phrases and lower level chunking into words and phonemes. At higher levels of analysis, task descriptions, plans, explanations and life stories have also been shown to be tree-structured, or hierarchically chunked (1992:375).

Schmidt comments then on the ability of an artificial intelligence system (Soar) developed by Newell to create, mix and activate internal generation of higher and lower level chunking. These comments again are of interest to a consideration of formulaic sequences.

> Soar suggests a model for representing the ways in which creative and routine elements may vary in fluent speech, for example, when formulaic utterances fill slots within a larger discourse pattern or when formulaic frames themselves have open slots (1992:375).

Schmidt's observation on 'the ways in which creative and routine elements may vary in fluent speech' is returned to briefly in Section 3.6.4. Schmidt referred to *slots* within a *pattern,* a description which leads to a consideration of template theory. Template theory developed a perceived weakness in chunking theory in accounting for high degree of expertise. Template theory proposed there was a need to incorporate a description of more complex data structures. Referring to chess, a template is described as,

> …a schematic structure that is more general than an actual board position. Each template consists of a *core* (very similar to the fixed information stored in chunks)

plus *slots* (which contain variable information about pieces and locations) (Eysenck & Keane 2010:485).

A template is not only larger than a typical chunk, typically ten items as opposed to seven, it is more complex and more abstract in representation. The development of templates from chunks requires extensive practice. The benefits in performance are of faster retrieval, there are considerably fewer templates stored than chunks. The specification of slots also implies an advantage where flexibility is called for, such as variation in use. Slots are not simply empty spaces. Again with reference to chess, Gobet describes characteristics and benefits of slots:

> Template possess slots that may be filled in when viewing a position, in particular for features that are not stable in these types of positions. Slots, which may have default-values, contain information on the location of certain pieces, on potential moves to play, or on semantic information like plans, tactical and strategic features, and so on (1998:127).

Slots, then, may carry as a function of their context a high degree of potentiality and may be of considerable benefit to performance. Chess playing occurs in real time but slow time, and research presented by Eysenck and Keane (2010) indicates that slow search processes were still important for experts in chess. Does template theory have anything to say about on-line language production? The discussion here is more speculative but nonetheless interesting.

Ellis has expressed interest in chunking from a constructivist perspective and argues that chunking and the development of schemata may play a fundamental role in language acquisition. He posits a central role for memorized sequences in vocabulary learning, idiom learning and the acquisition of grammar (1996, 2001) and accordingly sees phonological memory as pivotal in the first and second language learning process. Examining the operation of phonological memory closely, he describes cyclical interactions 'which allows learners to bootstrap their way to knowledge of L2 structure' (1996:108). The process he describes (1996, 2001) is a 'cycle of learning', outlined as follows:

1. Input to WM is filtered by LTM schemata, sensitive to sequences.
2. WM contains a phonological loop which holds a certain quantity of verbally coded information.
3. Chunking occurs with perceptual experience, e.g. verbal input.
4. Chunking occurs at phonological, lexical and syntactic levels.
5. These chunks form schemata through which further audio input is filtered, with ready perception of patterns and facilitating more fluent comprehension.
6. Experience of the environment can lead to modification of schemata

Schemata in Ellis's description are derived from chunks and are abstract, thus equivalent to templates and different to exemplars. It was noted in Section 2.4.3 that some evidence suggests the link between WM and long-term memory is not unidirectional. In Ellis's description, schemata operate at phonological, lexical and syntactic level but presumably also at discourse level, as proposed by Schmidt above. The use of schemata is seen by Ellis and Sinclair (1996) to facilitate fluent production. They argue that on repeated encounters with a pattern one is aware of 'the patterned chunk…not the individual components' (1996:244). They illustrate with an analogy from Morton (1967) of children learning to read time and giving careful attention to the position of the hands, whereas 'when experienced adults consult their watch, they are aware of *the time* and have no immediate access to such lower-level perceptual information' and conclude, '[S]uch influences of LTM on working memory underlie the development of automaticity' (Ellis & Sinclair 1996:244). Interestingly, such automatic productions can still be prefaced by careful consideration, one might look closely at a watch if, for example, one had lost track of time, a deliberate pause to ensure the first reading is correct. The point nevertheless holds about not actually 'compiling' the constituent elements together.

A process of chunking facilitating fluency in language comprehension was outlined above but it is not difficult to extrapolate a similar benefit for language production, with chunking underlying fluent production from phonemic to discourse levels. To anticipate the discussion in Chapter 3, fluent performance is facilitated by conventionalised language chunks, '[A]nother allied aspect of automaticity is the high frequency of prefabricated expressions or language chunks' (McCarthy 2010:4). It is the *cognitive* process of chunking, Ellis argues, which underlies the 'single choice' presented by idioms, and schematic representation of many of these chunks which facilitates acquisition (2001:45). One might postulate, for instance, that if a learner has formed a chunk comprising a phrasal verb *d'éirigh liom* (I succeeded, got on) that this would sensitise or prime the learner to notice usage such as *Ar éirigh leis an bhfoireann? Níor éirigh (leo), faraor,* (Did the team succeed? They didn't, unfortunately) and that the chunk might undergo higher level representation, with interrogative and negative specification, perhaps in the form of a template with a core comprised of *éirigh le* and slots for pre-verbal particles, inflection and subject specification.

Perhaps counterintuitively then, L2 proficiency may be indicated not so much by surface complexity as by 'the extent to which a person is able to exploit a store of native-like memorized sequences, and the extent to which a person is able to construct complex and extended syntactic turns out of smaller sequences' (Foster et al. 2000:356) – in brief, the ability to use chunks and create slots for variable elements.

Chunking, to conclude, is a basic feature of memory organisation and underpins learning and development of competence. It is been shown to be critical to the development of expertise, the ability to perform fluently and with flexibility.

2.5 Developing automaticity in speaking

2.5.1 Introduction

Thus far, the argument has been made that fluent speech reflects a fluency in the cognitive processes underlying the speech production. Automatic processing, in particular, is central to much research on fluency and a process of proceduralization suggests a route in skill development to automatic production. Turning to speech production, we saw in Levelt's models that automatized processes are intrinsically implicated in speaking. At that point, it was necessary to consider cognitive processes by which language input is facilitated and organised in memory; the phonological loop and chunking. In summary, the key elements highlighted in fluency development are automatization, proceduralization and chunking.

In the discussion on automatization, reference has been made frequently to practice and repetition. In ACT it is practice which drives proceduralization. DeKeyser identifies 'result of practice' (2001:130) as a common feature in his survey of automaticity characteristics. This suggests a route for instruction but practice and repetition have received much negative press within the communicative approach. In part, this was a reaction to 'drill and kill' (DeKeyser 2010) routines employed in behaviourist pedagogical models, where context and meaning were weakly addressed. A rejection of mechanical repetition and limited transformation activities also reflects principles intrinsic to communicative and task-based approaches, that of the use of communication to express meaning. Communicative and task-based principles have to some extent created an uneasy context for the integration of practice in the classroom, as noted by Gatbonton and Segalowitz:

> Although one component of fluency is automatic, smooth and rapid language use, there are no provisions in current CLT methodologies to promote language use to a high degree of mastery through repetitive practice. In fact, focused practice continues to be seen as inimical to the inherently open and unpredictable nature of communicative activities (2005:327).

Rossiter et al. (2010) carried out a systematic examination of L2 textbooks and 14 teacher resource materials with regard to treatment of oral fluency. They found that the development of fluency was neglected with 'little or no explicit, focused instruction on the development of fluency skills' (2010:585); the dominant approach was the use of 'free-production' tasks, there was a very limited range of fluency activities and, specifically, that 'rehearsal and repetition, consciousness-raising, and use of discourse markers in particular are under-

represented in the texts' (2010:599). These findings are similar to those of Cullen and Kuo (2007, discussed in Timmins 2012) who surveyed a sample set of General English course books published in the United Kingdom since the year 2000.

Textbooks almost inevitably lag behind research but it appears the tide has turned in research at least. With the benefit of studies on learning, memory organisation and related studies in SLA, as presented above, and a review of the extent to which language use is truly novel or creative, presented in Chapter 3; there is now a reconsideration of the role of practice in the L2 classroom. Locating second language learning within the framework of skills learning has helped to legitimate the approach, without claiming that learning a language is equivalent to the learning of any other skill. Of course the objectives and nature of appropriate practice in the SLA context still require description.

2.5.2 Practice for proceduralization

While activities designed specifically to foster proceduralization do not appear yet in standard L2 textbooks (Rossiter et al. 2010), there is strong theoretical interest in the process, as noted in this chapter, and a growing body of relevant empirical research. The main research question has been whether instruction designed to prompt automatization, or, more specifically, proceduralization, results in fluency gains (de Jong & Perfetti 2011, DeKeyser 2001, Segalowitz 2000, 2004; Segalowitz & Hulstijn 2005, Towell et al. 1996). Practice and repetition is central to the treatment delivered in Ferman et al. (2008), and de Jong and Perfetti (2011). In both studies, the researchers are interested in investigating aspects of proceduralization, specifically in the relative contributions of procedural and declarative memory systems in grammar learning (Ferman et al. 2008), and the contribution of proceduralization to speech fluency (de Jong & Perfetti 2011).

The main objective in employing the techniques of practice and repetition in these studies is to foster fluency through engaging learners with proceduralization and chunking processes. DeKeyser is a strong advocate of practice and has outlined a framework within which the role of practice is clearly stated in terms of proceduralization, as understood within skills acquisition theory in general and within the ACT model in particular. DeKeyser and Criado (2012) argue for the relevance of skills acquisition theory to language learning because language use is a performance, 'assuming that one is interested in what students can do with the language at various stages of learning, and not just what the underlying abstract competence is' (2012:323).

At the heart of the approach to practice in skill acquisition theory is a sequencing of foci and

activities, replicating that described in ACT. DeKeyser states 'skill acquisition theory… stresses the role of declarative knowledge in the development of procedural and eventually largely automatized knowledge' (2010:157). He stresses that this is not a question of one kind of knowledge 'turning into' another kind, but rather 'one kind of knowledge playing a causal role in the development of the other' (2010:157). This is an important distinction, 'with increased practice and proficiency it is not just representations that change, but also the skills for using them' (2010:157), one recalls the proceduralized chunk in ACT.

Bygate (2009) also uses ACT, a 'construct of development' to outline a teaching approach to oral language development. He suggests learners need opportunities to acquire the DK developed through speaking, constituted along pragmatic and discourse dimensions. He goes on to say speakers 'need to activate their own use of these resources. That is, declarative knowledge needs to be complemented by procedural knowledge' (2009:421); Bygate makes the analogy with a repertoire (DK) and the capacity to use it (PK). Bygate (2009) sets out a programme of work required to translate these principles for the classroom. Firstly, what is entailed by DK and PK need to be specified in relation to speaking. Secondly, decisions need to be made about selection, sequencing and delivery of activities, and the role of explicit instruction in delivery. Bygate outlines an approach employing what he terms 'varied repetition' which is presented below along with other sample programmes.

Appropriate practice and repetition activities can prompt chunking processes in the learner in comprehension, memorization, storage, and retrieval. At the input stage, materials selected or developed for students need to be examined carefully with a view to how targeted chunks (linguistic items) or chunking (in the speech stream) can be highlighted or made more salient to activate noticing in students. 'Noticing' is 'not just to input in a global sense but whatever features of the input are relevant for the target system' (Ellis 2002:173). Initial activities can be designed to foster metalinguistic awareness and declarative knowledge, e.g. discourse structure. Such input may be used to initiate construction of exemplars, through repetition activities for students, which they can draw on in subsequent activities.

Bygate (2006:169) talks of conceptualization being the driving force in the production process and within the communicative approach a communicative need is paramount. However, where there is a strong interest in repetition and practice for fluency effect, it might also be the activity itself which can be the focus, and students can benefit in becoming familiar with and competent in such activities. Within the present research this was felt to be particularly important where techniques were new to students and where competency with the technique itself could be significant in gains made, such as with the shadowing activity,

the feedback from participants presented in Chapter 6 would seem to substantiate this. In addition, if low conceptual demands are made of students in terms of content preparation, this could free up attentional resources for the aspects of speech of interest in the programme. In the course design for the present study it was decided to initially restrict the amount of conceptualization required of students, and to involve students with a lot of memorisation and repetition activities. As the course progressed, students were engaged firstly with initially short but progressively longer productions tasks. Again, these were preceded by preparation work involving repetition work.

Chapter 4 details a close examination of a fluency programme (Gatbonton & Segalowitz 1988, 2005) and of a number of empirical studies employing practice and repetition with a focus on formulaic language. A range of practice and repetition activities are used intensively in the fluency programme designed for the present research. These techniques and activities are elaborated on further in Chapter 4, in the presentation of the treatment design and unit of instruction. Materials and delivery notes for the two courses delivered are supplied in Volume 2.

Before turning to a presentation of some practice and repetition activities, the issue of feedback in fluency work needs to be addressed. Johnson and Jackson (2006) make a strong case for focus on *performance* to merit attention in feedback, in addition to the more typical focus on *competence*. They argue that where the task is central and '"getting the message across" is presented as the main aim of an activity, the learner may have little motivation for language improvement' (Johnson & Jackson 2006:541). This has implications for assessment of performance needs and for performance-related feedback. The authors make the distinction between competence needs and performance needs, the latter often best identified through actual performance. With regard to feedback, they advocate students becoming aware of the concept of performance-induced mistakes. Focusing students' attention on performance needs, performance pressures and performance-induced mistakes can be very important in classroom contexts where competence still tends to be privileged over performance. In addition, students may not have a nuanced appreciation of the various qualities that make for a fluent performance, or over-emphasise a single quality such as speech rate. In the course designed for the present study, for example, students after the repeated narration class were asked to note comments on aspects of their own performance, if speaking, or on the other student's performance, if listening. Figure 2.3 is of an assessment form used by speakers after the second delivery of a narrative. During the shadowing activity, the researcher found it very useful to be able to monitor students' performance closely, on occasions even sitting beside student and delivering a tricky phrase *with* student

after the shadowed speaker, at other times complementing students on fluent delivery.

Mé Féin agus mo Chlann 1B

Ainm: _____

What did you feel worked well for you? Please tick no more than <u>two</u> statements
- ☐ I was able to keep talking for most or all of the time
- ☐ I knew what I wanted to talk about most or all of the time
- ☐ I was able to use some of the *Frásaí Cairdiúla*
- ☐ I remembered vocabulary and phrases I wanted to use.
- ☐ I used most/all of the elements from my prepared work.

Please note which, if any, of the *Frásaí Cairdiúla* you remember using.

_____
_____
_____

What did you feel did not work well for you? Please tick no more than <u>two</u> statements
- ☐ I was not able to keep talking for most or all of the time
- ☐ I did not always know what to talk about
- ☐ I wasn't able to use some or any of the *Frásaí Cairdiúla*
- ☐ I couldn't remember vocabulary and phrases I wanted to use.
- ☐ I did not use most/all of the elements from my prepared work.

Figure 2.3: Student self-assessment in 4/3/2 speaking

2.5.3 Sample activities

The activities illustrated here come from class 1 and 4 of Course 1. The full-size handouts may be inspected in Volume 2. The opening section of a first-hand account of 9/11, delivered during an interview on the radio, was broken into 20 speech runs and activities developed around this input. Each activity illustrated below employs restricted repetition, students are not asked to vary the runs or to work creatively with them. However, each class engages students in very different types of repetition activities. Overall, then, there is a combination of repetition *within* classes and *across* classes, all based on this account of 9/11. Other classes combine repetition work within contexts demanding free production. For example the shadowing activity in Course 2 employs restricted repetition work during the shadowing activity, with ever-increasing demands made on memorization and phonological rehearsal, which is then followed by a prompted but free narrative delivery which is also repeated. An illustration of the shadowing activity is provided in Chapter 4.

Stage 1: Listening

Students listen to audio a couple of times and are advised to pay attention to manner of speaking, and not to worry about content. The narrative topic is one they are all familiar with.

Focus: Noticing activity. Speech rate, rhythm and prosody of speech

Repetition: Audio

Stage 2 Narrative reconstruction

Students given slips with chunks of text (Figure 2.4), working in pairs they reconstruct story on template (Figure 2.3). Audio played a couple of times as they do this.

Focus: Discourse structure, description of event in past

Repetition: Working with speech runs, seeing text extracts as composed of sequences. Practice in reading aloud as they negotiate text reconstruction.

Stage 3 Delivery of narrative

Narrative in full projected on screen (Figure 2.5), students listen to audio, each student given a speech run to deliver, class deliver narration, following slides have increasing amounts of text deleted, final slide has empty slots (Figure 2.6). Students deliver narrative a couple of times aiming for fluent delivery at speech rate approximating speaker.

Focus: Fluent oral delivery, narrative sequences, narrative turns

Repetition, memorization: oral delivery of narrative, memorization of own run

Stage 4: Story reconstruction

3 classes later, each student is given a speech chunk to memorise from same narrative, working in pairs they mingle around class, listen to other students' speech runs and write these out on cards at a workstation. In pairs they reconstruct story on 'jigsaw' template (Figure 2.7).

Focus: Narrative reconstruction, oral delivery of speech runs

Memorization of other students' runs, practice with delivery of own run.

Tubaiste Nua Eabhrac - Tús an Scéil

Tá Helen ag caint anseo faoi bheith ag obair i Nua Eabhrac nuair a tharla eachtraí 9/1. Tosaíonn sí ag caint faoin maidin.

Raidió na Gaeltachta   9/11/2011

1	11
2	12
3	13
4	14
5	15
6	16
7	17
8	18
9	19
10	20

Leanann Helen ag caint faoi cad a tharla níos déanaí agus í san oifig. Scread duine go raibh eitleán tar éis ceann de na túir (na Twin Towers) a bhualadh. Rith siad go léir go fuinneog.

H1C1

Figure 2.4: Story Template

is is cuimhin liom an mhaidin sin	agus bhí. na héinne den dtuairm
maidin Dé Máirt eh ab ea í eh	ag an dtráth san
spéir ghorm miorúilteach gléineach gléineach gorm	gur duine éigin a chuaigh amú
a bhí os cionn Nua Eabhrac eh	gur botún a bhí ann
thugas faoi ndear an spéir a bheith chomh geal	mar is minic a d'eitlíomar
agus mé ag dul chun oibre eh	os cionn eh oileán Manhattan
trasna na habhann go go dtí New Jersey	a bheifeá ag teacht isteach agus amach go dti Aerfort La Guardia
bhíomar ag féachaint ar an deatach	ní bheidh aon iontas eitleán
a bhí a bhí ag éirí in áirde	a bheith os cionn in airde
as as an bhfoirgneamh	agus cheap daoine gur botún a bhí ann

Figure 2.5: Narrative sequences

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Figure 2.6: Disappearing text, two sequential slides

Slide 1:

Tubaiste Nua Eabhrac – 40 Soicind

1. ach ansan
2. eh go gairid ina dhiaidh san
3. agus sinn fós ag féachaint ar
4. ar an láthair
5. mar go raibh na héinne ag féachaint
6. féachaint cad a bhí ag tarlúint
7. bhí an teilifís ar siúl san oifig
8. is na héinne ag caint
9. em ba ghearr nó gur mbuail an
10. go bhfacamar an dara ceann ag teacht tríd
11. tríd an spéir agus í ag dul isteach
12. sa dara túr
13. eh tar éis a naoi a chlog
14. timpeall trí nóiméataí tar éis a naoi a chlog
15. bhuail an dara ceann é
16. agus chomh luath is a
17. bhuail an dara heitleán an, an túr
18. bhí a fhios ag na héinne
19. tháinig, tháinig ciúnas
20. ciúnas diamhair san áit

Slide 2:

Tubaiste Nua Eabhrac – 40 Soicind

1. ach _____
2. eh go gairid fína _____ san
3. agus sinn fós ag _____
4. _____ láthair
5. mar go raibh _____ ag féachaint
6. féachaint cad a bhí _____
7. bhí an teilifís _____ san oifig
8. is na héinne _____
9. em ba ghearr nó _____ an
10. go bhfacamar an _____ ag teacht tríd
11. tríd an spéir agus í ag _____
12. sa dara _____
13. eh _____ a naoi a chlog
14. _____ trí nóiméataí tar éis a naoi a chlog
15. bhuail an _____ é
16. agus _____ luath is a
17. bhuail an _____ an, an túr
18. bhí _____ na héinne
19. tháinig, _____ ciúnas
20. ciúnas diamhair _____

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Figure 2.7: Jigsaw Template

2.6 Conclusion

It is strongly contended that automaticity is an intrinsic feature of cognitive processes underpinning fluency. We have further seen that proceduralization and chunking are central to the process of automatization. Appropriate instruction, with an emphasis on practice and repetition, may foster proceduralization and chunking in students which should result in fluency gains. In the next chapter, attention will be given to language, not as an abstract construct, but to language in use. The central argument made is that use of frequently recurring sequences offers significant processing advantages and thus enhances automaticity of production, a key indicator of fluency.

Chapter 3 Formulaic Sequences and Fluency

3.1 Introduction

Chapter 3 considers a particular aspect of language which is of key importance to a discussion on fluency: formulaic language. The central argument developed in this chapter is that examination of language in use points to the extensive presence of formulaic language. Furthermore, an investigation of the processing of formulaic language suggests significant fluency effects. It is then argued that acquisition of formulaic language merits attention in the language learning classroom and that prompting proceduralization of formulaic sequences can be an important factor in L2 formulaic language acquisition.

The chapter is comprised of two parts. It commences with a brief review of systematicity in language use. There are extensive accounts of lexical accounts of language systematicity and Sinclair's Idiom Principle is of particular importance in the current discussion. This establishes the background to the presentation of formulaic language in this chapter. Research exploring the *psychological reality* and *processing* of formulaic language is discussed with emphasis given to research investigating fluency effects. The question of *acquisition* and *representation* is then addressed. As of now, this question is primarily explored in theoretical accounts. Theories on frequency effects and theoretical models of dual storage and processing are presented. Accounts of formulaic language *use* are detailed in a survey of influential work attempting to define formulaic language through comprehensive descriptions of its features and functions.

The second part of this chapter is concerned with the language learner and formulaic language. It is contended that formulaic language use has important benefits for the language learner; these benefits are detailed. Many questions have been raised, however, about the acquisition of formulaic language by the language learner. Research in this area is given close attention. Turning to the classroom, specific challenges arise. Context, input and methodologies are selected for discussion, again presenting relevant research and highlighting implications for this current research.

3.2 Language in use and language systematicity

3.2.1 Language systematicity

There is a long academic tradition of looking at language as performance, as opposed to competence. Disciplines such as philosophy, anthropology and sociology have all seen performance as a central aspect of language. Underpinning many of these studies is the

premise that language, amongst other things, is an aspect of cultural and social behaviour. This perspective has also come to inform more recent disciplines such as discourse studies and pragmatics, where language in use is a legitimate and important focus of study.

Advances in technology have made available to researchers an extensive variety of language corpora, including written, spoken and multi-media. Increased capability and sophistication in corpus design has enabled researchers to carry out wide-ranging and multi-faceted analyses of data. Already there is a substantial body of work carried out in fields such as discourse analysis, dialectology, phraseology, genre studies and conversation analysis. Notwithstanding the diversity of these fields, all robustly confirm that language in use, both written and spoken, is patterned and routinized (Römer & Schulze 2010; Swales 2000).

In corpus analysis attention is frequently given to identifying features exhibiting patterned use, to delineating the various factors which contribute to this systematicity, and to describing their manner of operation. There is also an interest within disciplines such as cognitive linguistics and pragmatics in assessing the benefits of language systematicity for language users, both as individuals and as members of a community.

Indeed, it is contended that learning about the systematic nature of language in use does more than inform us about speech communities and the intricacies of language involvement in constructions of identity. Chomskyan models provided a syntactic rule-based explanation for the systematicity of language, a system conceived of in terms of innate competence and abstract principles. The validity of an exclusively syntactic based grammatical description of language has been long challenged. The umbrella term, 'emergentist models', groups together varied theories that have in common an interest in the central role played by experience in language representation and learning: 'in such models, experience plays an important role in the creation, entrenchment and processing of linguistic patterns' (Aron & Snider 2010:68). It is some time since Sinclair, a leading figure in the development of corpus studies, argued 'it is folly to decouple lexis and syntax, or either of those and semantics' (1991:108). Bybee more recently concludes from a brief discussion of functionalism '[T]he argument that is gaining strength is that separating language from the way it is used removes a valuable source of explanation for why language has grammar and what form that grammar takes' (2007:6). In similar vein, Schmitt questions the traditional assumption that grammar describes the rules of a language, and argues for what he calls 'patterning' to also be considered as part of the grammar of a language. Commenting on the systematic nature of language, pervasive from the smallest units of communication to extended discourse, he argues that widespread patterning in language 'often accounts for the systematicity of

language better than rules' (Schmitt 2005). These ideas are very suggestive for diverse approaches to understanding language. However, as the focus of the present study is on fluency and a particular form of language patterning, formulaic sequences, they will not be developed further.

3.2.2 Spoken language

Moving to an examination of spoken language, we meet a situation that seems to mirror the competence-performance divide. The distinction between spoken and written language has, at least implicitly, long been recognised. The classical tradition of grammar teaching, for example, within which standardisation and accuracy of form is central, can be seen to recognise this distinction by omission! There are historical and cultural reasons for this preference, but in part, the focus on the written word may have resulted from a view that the spoken word was subject to too much variation and was, perhaps, a somewhat imperfect realisation of 'the language'. Examination of any transcribed conversational exchange is likely to identify features such as incomplete sentences, phrases and ellipsis, interruptions, and unclear referents, features which a traditional grammar book would have difficulty in explaining. However, technology again has greatly facilitated progress in our understanding of spoken language. The availability of large quantities of spoken language recordings, including naturally-occurring conversation, along with increasingly sophisticated tools for analysing this data, has made it possible to investigate aspects of spoken language that hitherto were extremely difficult and laborious to scrutinise. The accumulated evidence is thus now substantial and it is generally accepted that that there are 'rules of speaking' apart from the sociolinguistic conventions noted by Hymes (1972); that spoken language has a grammar (i.e. a grammar distinct from the grammar of written language) and that spoken language, too, is routinized on lexical, pragmatic, semantic and discourse principles (Carter & McCarthy 2006). More recently, Carter and McCarthy, highlighting the most common manner and context of speech production, indicate a preference for the term, conversational grammar, '[we] see the global ubiquity of real-time, face-to-face conversations as the benchmark for a grammar of speaking (2015:5).

The 'Cambridge Grammar of English' (Carter & McCarthy 2006) has a comprehensive introduction to the grammar of spoken English. The following is just a small sample of the many features they identify as characteristic of spoken English:

1. It is easier to identify communicative units in speech than sentences. These are generally short, and may be marked by pause, pitch change and so on.
2. Preference for pronoun use over nouns.
3. Predominance of simple noun phrases.
4. Phrasal chaining preferred to embedded structures; preference for parataxis over hypotaxis.

5. Use of tags
6. Repetition, recasting
7. Ellipsis
8. Redundancy
9. Vague language

It must be emphasised that corpus research has convincingly established these are not random, idiosyncratic features; they are characteristics of speech, not of individual speakers. It is argued in this chapter that the routinized features of spoken language have their basis, in part at least, as a response to the cognitive pressures which the varied demands of speech production create for the speaker. This study turns now to consider one aspect of routinized language use, both written and spoken, that has been extensively researched, that of word combination. The discussion is guided by an interest in understanding how word combination facilitates fluency,

3.2.3 Word combination: keeping company and defying labels

Words, particularly written words, may have discrete form and some words may have a specific referential function but in our use of language 'particular words are frequently to be found in the company of certain other words' (Singleton 2000:47). We favour the use of certain words in certain combinations. Word combination lies at the core of lexical organisation and, consequently, is a significant feature of language systematicity.

Such combination has a semantic effect and may extend, restrict, enhance or subvert the meaning carried by the words considered as discrete items. It is not disputed that combination has an important role in making meaning: '[I]t is by now well known that for the most part meaning belongs to multi-word units rather than to individual words' (Danielsson 2007:17). Firth's pithy dictum 'You shall know a word by the company it keeps' (1957:19) neatly encapsulates much of the contribution corpus research has made to lexical description. Firth's interest in collocations arises from his view that meaning is an effect of how language functions in a particular context. This functionality is *semantically* described by him – the environment in which a word occurs constitutes part of the meaning of the word, and is *pragmatic* in its orientation to action and participants.

Even prior to Firth's seminal work there was an interest in collocations such as idioms and other fixed expressions. Palmer (1966), for instance, in 1933 published a report on the relevance of collocations to language teaching. But the pervasive nature and extent of word combination was less recognised prior to the availability of large corpora and the development of concordance programmes. We now recognise that collocations include much more than fixed phrases – and that phrases may have varying degrees of 'fixedness'. We also

recognise that there are other types of word-combination units, apart from collocations, and, it might seem, as many ways different ways of classifying them. Mel'čuk (1998), writing within the discipline of phraseology, distinguishes idioms and collocations as different types of 'set phrases', whereas Nesselhauf (2003) classifies collocations into three groups – one of which is idioms. Even a cursory survey of the numerous approaches to defining and categorising the various types of word-combination units is beyond the scope of this study (for a review see, for example, Cowie & Howarth 1996), though it will be necessary to address some of the difficulties encountered in more recent endeavours later. Danielsson (2007) notes that the growing interest in multi-word units (MWUs) has been accompanied by a proliferation of terms used to refer to them and continues:

> …the lack of uniform terminology may be just one of many clues to the confusion, and to the need for further research. Although the importance of multi-word units is accepted, there are no accepted answers to simple questions such as "What exactly constitutes a multi-word unit?" or "Where does a multi-word unit begin and end?" (Danielsson 2007:18).

An observation which might lead us to assume these questions are not so simple after all. The debate on terminology, definitions and classifications is not a critical one for this present study. At this point, it is more important to commence working towards a broader framework for understanding word combination. John Sinclair is a leading figure in early studies of corpus studies and a firm believer such work could help us better understand lexical organisation. His theoretical description of a system of language production underpinned by an 'economy of effort' principle might be seen to anticipate the broader framework developed in this chapter for understanding formulaic language.

3.2.4 The idiom principle

We noted earlier that corpus studies have contributed to a questioning of the Chomskyan distinction between competence and performance. For Sinclair (1987, 1991) corpus research also calls into question the extent to which language use is an expression of creativity. One of the distinguishing features of language is the potential for creative use of it. Chomsky made this a focus in his explanatory model. Pinker proclaims with a flourish '...virtually every sentence that a person utters or understands is a brand-new combination of words, appearing for the first time in the history of the universe' (Pinker 1995:2). It is telling, of course, that Pinker talks of sentences, not the fragments or incomplete sentences that constitute much of natural spoken discourse.   Van Lancker-Sidtis firmly counters the 'brand-new combination' assertion: '[M]any utterances in everyday language are conventional expressions that must be used in a certain way' (2004:208); it is not just the lexical items we 'borrow', they come packaged, as it were, with rules of use. In Section 3.6 the nature of such rules is addressed. There is no questioning that we have the ability to use

language creatively and that we exercise this ability to a greater or lesser extent. The fact that we do not appear to exploit the creative potential of language much of the time should not be casually dismissed as a matter of trite importance in light of this remarkable ability. Likewise, and this is an underlying principle of the present study, in our efforts to understand and support the language learning process MWUs or conventionalised language production should not be automatically relegated to the margins in a casual 'some useful phrases for the back pocket' manner. It is contended that conventionalised language production can be fostered in a manner that respects the discourse and pragmatic integrity of such use, and is of genuine fluency benefit to the learners. Perhaps with a deeper understanding of conventionalised language there may not be such easy readiness to regard it simply as a somewhat superficial or inferior form of language use.

Sinclair (1987, 1991) accounts for the prevalence of MWUs in language use, not unsurprisingly, as a function of benefit. The precise nature of this benefit has been investigated by many since, and is explored in more detail later in this chapter. Sinclair postulates that the extent of conventionalized language use reveals something fundamental about how language is produced. His description of this process comprises two contrasting principles: open and idiomatic. In producing language it may appear that there are choices available to a speaker: open slots, lexical choices limited *only* by grammatical constraints. But language use shows such choice is not realised, estimates of the use of MWUs in naturally occurring spoken language range from 32.3% to 58.6% (Conklin & Schmitt 2008). Altenberg concludes from an examination of corpora of spoken English 'the most striking impression that emerges from the material is the pervasive and varied character of conventionalized language in spoken discourse' (1998:120). We do not, at all times, construct phrases anew from individual words; instead we frequently draw on phrases that are preconstructed in whole or in part. The term 'prefabricated' or 'prefabs' is more commonly used in the literature. According to Sinclair such phrases 'constitute single choices, even though they might appear to be analysable into segments' (1991:110). This suggests extensive choice is, in some manner, managed or made manageable. Sinclair calls this process the idiom principle.

Apart from citing corpus evidence, Sinclair puts forward three arguments supporting the operation of the idiom principle and the pervasive nature of conventionalised language; one is based on a descriptive analysis of semantic effect, another on a hypothesised model of psycholinguistic processing, and a brief argument is made on grounds of cultural identity.

From corpus research Sinclair developed the concept of semantic prosody. He noted that

there was an evaluative aspect to many frequently used word combinations. A single word may in itself not carry positive or negative connotations, but 'many uses of words and phrases show a tendency to occur in a certain semantic environment', (Sinclair 1991:112), an effect of the company one keeps. From habitual association a word may come to carry a charge (positive or negative) which in turn limits its usage to certain environments, unless one deliberately seeks a 'spark' of humour or ironic effect. While 'happen' may appear to be semantically neutral, it is generally associated with an undesirable event: accidents, tragedies, catastrophes don't occur, they happen[22]. It should be noted also that, apart from semantic checks, choice may also be restricted syntactically. Singleton, for instance, notes how 'set about' tends to be followed by a verb in the *–ing* form (2000:56). Semantic and syntactic restrictions may be seen to enhance meaning, and our ability to express meaning effectively, in a subtle and nuanced way.

The second argument proposed by Sinclair shifts attention from the lexical framework and rests on a psycholinguistic understanding of how MWUs are produced and processed. Indeed, the term 'MWU' highlights lexical quality, the term 'prefabricated' highlights process of construction. The demands of language production, as discussed in Chapter 2, require us to ease processing pressures. Sinclair proposes we have an innate preference to economise on effort where possible. One might question whether this preference may indeed be one of necessity. Sinclair contends that MWUs reduce pressure because of the manner in which they are produced and processed, as a whole rather than through word-by-word construction. It is remarkable that a similar view was articulated close to a century ago by Jespersen (1924): 'a language would be a difficult thing to handle if its speakers had the burden imposed on them of remembering every little item separately' (cited in Wray 2002:7). The role of MWUs in processing has been given extensive treatment within the field of psycholinguistics and cognitive psychology, some of this research will be presented in Section 3.4. Sinclair argues the idiom principle is more commonly active in language production than the open principle and goes so far as to suggest that this may be the default setting in language production: '(W)henever there is good reason, the interpretative process switches to the open choice principle, and quickly back again. Lexical choices which are unexpected in the environment will probably occasion a switch' (Sinclair 1987:324). Wray (2002, 2008a) upholds this position in her 'Needs Only Analysis' of use, discussed in Section 3.5, but gives a stronger psycholinguistic basis to Sinclair's idiom principle, and offers a greater degree of elaboration on its psycholinguistic status.

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[22] It is interesting to compare the use of 'what happened here?' 'accidents happen' and 'you'll never guess what happened!'

Finally, Sinclair stated that 'similar situations recur in life and tend to be referred to in similar ways' (1991:110). While he does not develop this argument specifically on grounds of cultural identity, the idea of shared experience and promotion of self within a speech community are not too difficult to extrapolate from this observation. This leads, naturally, to a consideration of the function of MWUs from the perspective of pragmatics. From a semantic perspective, the notion of 'similar situations recurring' is also important. Frame semantics, for example, is predicated on the idea of conventional linguistic units being bound to conventional situations of use.

Sinclair regretted the idiom principle 'has been relegated to an inferior position in most current linguistics, because it does not fit the open-choice model' (1991:110). The power of the Chomskyan model of language possibly contributed to a privileging of the ability to generate novel utterances; perhaps also we are reluctant to diminish that which we perceive to flatter, and creativity is understandably accorded high status in many cultures. Nonetheless, the designation of idiom as 'inferior' has been robustly challenged. There is now a strong interest in the role of MWUs in language production, whether on grounds of semantic sensitivity and adeptness, ease of processing pressure, or effective self-promotion and interaction. Frequency of use alone suggests attention is merited, though it should be noted that a particular item may not have to be used frequently for it to become conventionalised. To take an example from Bybee, 'the prefabricated sequence *experience delays* is not very high in frequency, but it is the conventionalised way of expressing a certain notion' (2008:231).

To recap, the systematic nature of language in use is asserted across a broad range of disciplines. Attention has been given here to an aspect of lexical organisation, word combination or MWUs, and some postulated benefits attributed to conventionalised language use have been put forward. It is proposed that a principle of economy drives the use of MWUs but that other benefits also exist. The shift in discussion to cognitive processes, prompted by Sinclair, is central to the argument correlating formulaic sequence use with fluency. A focus on cognitive processes also demands a shift in terminology.

3.3 Formulaic language

3.3.1 Terms and labels

The term MWU has been employed up to now as a convenient term to encompass various types of word combination units, including collocations, phrases and idioms. The term was useful in the context of an overview based primarily in lexical and corpus description of language use. However, the discussion on Sinclair led to a consideration of psycholinguistic

processes. These will be further examined in Section 3.4, where attention is also given to questions of acquisition and processing. This broader framework requires a different terminology, which is briefly discussed here.

The term 'formulaic language' encompasses a broader perspective beyond that of corpus studies and lexical organisation, and will be adopted for the purpose at hand. Furthermore Weinert has observed that '[M]ost recent studies converge on the label *formulaic* as an umbrella term and refer to specific manifestations of the phenomenon with additional labels' (2010:2). There are many such 'additional labels'. The variety of disciplines that contribute to our understanding of language systematicity also stimulate and inform research in formulaic language , there is rich and lively debate on the topic. Of course, it can also create challenges when similar terms are employed across disciplines but do not always mean the same thing. In consequence, perhaps, one encounters a 'morass of overlapping terminology' (Bonk 2001:113). Schmitt (2004) details nine terms frequently used in a more general discussion, but cautions that over fifty are to be found in the literature (also Wray 2002). In part, this diversity is due to the immense number of forms under consideration, from two word phrases to longer collocations, idioms, proverbs and long standardized phrases. In addition, formulaic output may fulfil a diversity of pragmatic and semantic roles; for example as fillers, as conversational routines, as phrases with a single fixed semantic reference, and as rhetorical devices, among others (Boers 2006, Wood 2006, Conklin 2008).

The present study is not concerned with fine distinctions in formulaic output but is crucially concerned with the distinction between formulaic and nonformulaic in production, and with the cognitive processes underpinning this distinction. In consequence, two terms are employed in this study. *Formulaic language* is used to refer to conventionalised language use in general which is underpinned by a specific type of language production. *Formulaic sequence* (henceforth, in general, FS) is used to refer to particular instances or 'specific manifestations' of use. The term 'formulaic sequence' is used in studies similar to the present study, presented in Chapter 4. Wray's detailed definition of an FS is examined in Section 3.5. Of course to say an FS is an instance of formulaic language production settles terminology but raises a fundamental question: how does one judge if a given speech segment has been produced and used as a formulaic sequence or not? The definition, in other words, is one that still creates challenges in terms of identification.

3.3.2 Describing and identifying

From a morass of terminology it seems we enter a labyrinth: what do we pin the label to? Wray claims 'in the case of formulaic sequences, identification relies less on formal

definitions than the definition relies on identification' (Wray 2002:19). Analysis (statistical, discourse, lexical) of a variety of corpora, longitudinal analysis of acquisition patterns, processing measures for sensitivity, comprehension and production: these and many other sources have contributed to refining procedures for identifying formulaic language.

The approach taken by many earlier researchers in formulaic language facing this chicken and egg problem of definition/identification has been to attempt to systematically refine both identification and definition through the development of taxonomies. Putative instances of formulaic language are selected primarily through a combination of intuition, previous research and corpus frequency. These instances, and variations, are scrutinised. Through this analysis taxonomies are developed based on defining characteristics. These taxonomies in turn help in the process of revised or further identification of FSs, and in an examination of definitions of formulaic language. Clearly there is circularity in this procedure which doesn't resolve the fundamental problem of knowing if any given sequence is an FS. However, the process of creating and refining taxonomies has merits on two grounds. First, the scrutiny of linguistic output demanded by the process can prompt new insights into FSs. Second, the classifications developed and identification of exemplars and samples has been helpful in the development of pedagogical materials.

Form-based Accounts

Taxonomies divide mainly into those looking at form and those looking at function. Function-based accounts are presented in Section 3.6. Analysis of form can involve a focus on a number of factors. Frequently examples are considered in terms of a continuum.

- Semantic opacity: the degree to which an expression is opaque *twist someone's elbow* or transparent *at this time of his life*

- Syntactic regularity: the degree of regularity-irregularity, e.g. inflection restriction

?*I slept a wink* or normal restrictions flouted ?*by and large.*

- Fixedness: the degree of cohesiveness: *under the weather – under the table , blow the trumpet – blow your own trumpet* (examples from Howarth 1998)

- Lexicalized sentence stems, lexical phrases: discussed below.

Both Pawley and Syder (1983) and Nattinger and DeCarrico (1992) offer function-based descriptions of FSs. However, each specifies as an important element of their description a form-based category referred to respectively as 'lexicalized sentence stems' and 'lexical phrases'.

A lexicalized sentence stem specifies the conventionalized sentence structure for expression of meaning. Pawley and Syder illustrate with conventional expressions of apology, *I'm sorry*

to keep you waiting, I'm so sorry to have kept you waiting, Mr X is sorry to have kept you waiting all this time, all underpinned by 'a recurrent collocation' and grammatical frame: 'NP be-TENSE sorry to keep-TENSE you waiting' (Pawley & Syder 1983:210).

Nattinger and DeCarrico's (1992) treatment of 'lexical phrases' is mainly functional but their description of lexical phrases as 'form-function composites', strings 'with assigned pragmatic functions', is not far removed from the definition of lexicalized sentence stems. They further specify this group on two scales: variable – fixed, and continuous – discontinuous. 'Polywords' for example, such as *by the way* are fixed and continuous while 'sentence builders', such as *my point is that X* are variable and discontinuous. As formally described, lexicalized sentence stems and sentence builders appear to refer to a similar linguistic item. These items are viewed in both studies as significant in terms of frequency and function, and of particular importance in language learning. Section 4.8 gives further attention to this category.

It is clear that any one descriptive measure is unlikely to be able to encompass the diversity of forms associated with FSs. Nevertheless the approaches all contribute to identifying features associated with formulaic language and contributing to establishing frequency count. They are consequently of value in the L2 context, through supporting the development of more considered and principled language learning activities and materials.

Phonological Form

'One of the essential functions of prosody is to provide a basic cognitive skeleton that allows one to hold an auditory sequence in working memory' (Kuhn et al. 2010:235). An auditory sequence may in turn become lexicalized as an FS. Lin (2010) notes early child language acquisition demonstrates sensitivity to intonation, and also remarks that the first use of the term *phonological coherence* is by Peters (1983). Peters describes utterances produced by children beyond their grammatical competence level as 'produced fluently as a unit with an unbroken intonation contour and no hesitations for encoding' (Peters 1983:8; cited in Lin 2010). Indeed, phonological coherence is one of the criteria employed by Peters for identification of formulaic sequences. With increased access to speech recordings, and a growth in corpora, there has been an interest in studying the phonological form of FSs. From this research there is clear evidence that 'formulaic sequences are typically spoken more fluently, with a coherent intonation contour' (Schmitt & Carter 2004:5). Weinert similarly refers to 'fluent, non-hesitant encoding without break in intonation contour' (1995:182). Wray (2002:35) describes research carried out by Van Lancker and Canter (1981), which suggests listeners discriminate between production of figurative and nonfigurative phrases.

Recordings were made of narrations which featured similar strings e.g. *skating on thin ice.* In one narration the string was used idiomatically, in the other literally. Sentences containing the word strings were extracted and played to subjects who were asked to judge whether the strings were used figuratively or literally, and the average score was over 85% correct.

Phonological examination generally is concerned with two features: 'intonation (i.e. unbroken contour and single tone units) and tempo (i.e. resistance to internal dysfluency, no hesitations, few pauses) (Lin, 2010:177). Bybee (2002) gives evidence for reduction in frequently used phrases. Bybee reminds us that 'phonological production is neuromotor behaviour [which] becomes more fluent with practice. This fluency that comes about by automatization speeds up processing just as representational strengthening does' (2002:216).

Apart from providing a basis for identification of (at least some) FSs, phonological coherence is therefore also an important indication of a processing unit. An early example of such work is Raupach's (1984) analysis of FSs. Language processing is viewed in this study as a continuum from the most automatic to the most propositional. According to Raupach FSs were clearly delineated by speech phenomena such as pauses and prosodic features and served as 'indicators of processing units' (1984:116). Section 3.4 refers to further studies investigating this feature. Bybee claims both reduction conditioned by preceding and/or following words, and phonological changes fossilized in multiword chunks constitute evidence 'that chunks of words are processing units' (2002 217). Lin agrees but while Bybee (2002) contends the phonological evidence supports 'exemplar storage', Lin argues strongly a processing unit does not necessarily represent a storage unit, and that a storage unit might even be smaller than a processing unit. She admits empirical research is needed to verify this possibility. Separating storage and processing might be problematic in the case of formulaic language, where form-meaning mapping is seen to be the basis for establishing a sequence (Tomasello, 2000), and where processing speed indicates fast retrieval.

From a fluency perspective, production of phrases with intonational contours can benefit the learner. Lin refers to a suggestion by Wennerstrom (2006) that:

> …a more holistic style with less self-monitoring and a greater reliance on routinized
> language chunks would be characterized by longer intonational phrases which would
> in turn help learners who struggle with word-by-word speech to come across as more
> fluent speakers (Lin 2010:184).

Phonological coherence also indicates discourse and pragmatic function and conventionalised use within a speech community. From an L2 perspective, there are clear implications for instruction. Without acquiring phonological coherence, L2 production of a

word string may not be entirely successful. This feature is thus given consideration in the design of the test measures for the present study, discussed in Section 5.2.

More generally, the phonological contour of FSs may comprise the first form in which FSs are psychologically represented, prior to a fuller linguistic representation being formed. Schmitt and Carter (2004), citing Peters (1977) and Wray (2002), suggests that 'some L1 acquirers seem to acquire an initial phonological mapping of formulaic sequences proceeding from the whole to the individual parts' (Schmitt & Carter 2004:5).

The various aspects of formulaic language that have emerged in the discussion to this point – frequency of use, unique aspects of form and meaning, and connection with a speech community – are brought together in the following quotation:

> Studies indicate that 25 percent of typical conversational speech consists of formulaic expressions…Structurally, they are fixed and unitary, and their meanings are complex and usually nonliteral; they are rife with nuance and connotations, and they depend in special ways on social context. Most importantly, speakers in a community know these chunks intuitively (Van Lancker Sidtis, 2012:63).

In this section, it has been suggested that external features of a FS give an indication of an internal psychological reality. The next section presents a variety of studies that have investigated the psychological representation and functioning of FSs.

3.4 Evidence of psychological reality

It is incontrovertible that multi-word combinations exist in corpora, and frequency counts for many are high. Sinclair proposes this frequency is in the main a matter of economy of use, and asserts that FSs constitute a single choice for the language user. Pawley and Syder (1983) in an important and influential article made a persuasive argument that 'lexcialized sentence stems' offer processing speed benefits because of holistic storage. When uttering novel combinations, a single clause will generally not exceed eight to ten words. Yet speakers frequently, and fluently, utter sequences longer than this, such as: 'it just goes to show, you can't be too careful' (Pawley & Syder 1983:207). Similar findings are attested by Kuiper (2004) who examined speech production of talkers typically working in conditions of time pressure such as horse-racing commentators, and found much of their discourse was made up of formulaic language, in marked contrast to the more sedate commentary of cricket commentators. Evidence from corpora is important for many reasons but in itself does not reveal much of the psychological representation of FSs. Assertions of single choice, of holistic storage needed to be investigated empirically. Some studies exploring whether or not there is processing benefit in FS use are first presented. Confirmation by these studies that

there are processing benefits to FSs leads to the question, what is the nature of FSs as a mental or psycholinguistic construct? Studies investigating the psychological representation and processing of FSs will then be considered.

Wray details a range of neurological studies which 'confirm that formulaic sequences (or at least some types of them…) do seem to have a privileged processing status' (Wray 2012:294). Psychological studies investigating a processing benefit for FSs typically measure and contrast the processing of formulaic sequences and non-formulaic sequences. FSs have been shown to be read faster in self-paced reading tasks (Conklin & Schmitt 2008) and eye-tracking studies (Underwood et al. 2004). Conversely, Millar's (2011) study looks at the processing by NSs of malformed FSs produced by learners and found 'persuasive evidence that learner deviation from target language formulaicity places an increased processing burden on native speaker addressees' (Millar 2011:142).

Are FSs stored in a holistic manner? Conklin and Schmitt (2012) describe studies carried out on brain-impaired participants. One study (Mondini et al. 2002) investigates the production of compounds containing internal inflection and novel combinations requiring similar inflection. Accuracy results for compounds were much stronger than novel combinations, suggesting compounds are stored and processed as whole whereas novel combinations required the application of inflectional rules. Wray asserts such evidence may indicate a 'faster mapping of components' (2012:233) rather than holistic storage, but then argues these concepts are essentially vague and leave much to be resolved with regard to neurological access to FSs. Arnon and Snider (2010) investigate phrase frequency effects with an interest in establishing if there is a difference in how compositional and simple forms were represented. They found 'compositional phrases showed whole-form frequency effects like those displayed by simple and inflected words' and argue 'these findings argue against a clear distinction between the linguistic forms that are "stored" and the ones that are "computed" (Arnon & Snider 2010:78).

Other studies presented explore recognition and production of familiar and novel phrases by left- and right-impaired participants. These studies suggest that ''novel language is left-hemisphere lateralized, while fixed expressions are right-hemisphere lateralized' (Conklin & Schmitt, 2012:53). For a comprehensive survey see also Van Lancker Sidtis, 2012).   While neurological research is of tremendous interest and importance in attempts to understand formulaicity, caution is probably advised in generalising to more abstract linguistic principles. Some neurological research, of its nature fine-grained, limits variables and may present 'either-or' options to participants, (e.g. idiomatic – non-idiomatic use of word

strings). Results positive for processing differences based on this research do not provide conclusive evidence for a particular mode of language production. On the other hand, much of the research presented by Van Lancker Sidtis (2012) is based on natural speech production of people with diverse brain disorders. This research strongly attests to production of formulaic and novel language being localised in different areas. She concludes from her comprehensive survey:

> …it appears clear from converging sources that formulaic language and novel language are produced during spontaneous speech according to separate and distinct principles. That is, they are dissociated in cerebral function. The neurolinguistic results already described lead to the dual processing model with respect to speech production, which posits two different functional modes: novel and formulaic (Van Lancker Sidtis 2012:14)

Converging evidence for ease of processing of certain types of language structures and lexical items, and evidence for distinct cerebral sites being responsible for the production of formulaic structures, provides strong neurological support for a dual-processing model of language. However, it might be hasty to draw conclusions: 'while most speech production research and corpora investigations have shown the importance of formulaic sequences, research into the mental processing of formulaic sequences has not kept up' (Conklin & Schmitt 2008:77).

3.5 Linguistic accounts

In this section, the discussion moves from psychological evidence to linguistic theories which incorporate a substantive account of formulaic language in a description of language acquisition, learning and production. A dual-processing model is first presented, followed by approaches based on usage and frequency.

3.5.1 Dual-processing and Wray

Wray has developed a comprehensive and influential dual-processing account of formulaic and nonformulaic language (Wray, 2000, 2002, 2008a, 2008b; Wray & Perkins, 2000) that describes a process of language acquisition and learning, as well as production. Wray extends the range of formulaicity considerably, seeing the distinction between conventionalised and novel language as generally irrelevant and arbitrary. Any linguistic unit, not just MWUs or word strings, potentially can be formulaic. The crucial issue in determining formulaicity, therefore, is not one of lexical item form, type or frequency but is one of manner of production. Wray proposes a dual systems approach to formulaic language on the lines of Sinclair's *open choice* and *idiom principle,* but her model is considerably more interactive, dynamic, and bolder in scope. In essence, Wray claims that 'formulaicity

characterises the *normal* approach to processing' (Wray & Perkins 2000:13, emphasis added).

Wray's seminal definition of a formulaic sequence is a useful starting point. She defines a FS as:

> …a sequence, continuous or discontinuous, of words or other meaning elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar' (2000:465).

Wray is not concerned with the niceties of distinguishing the external features of the phenomena in question. She deliberately selects the term formulaic sequence 'to encompass the wide range of phenomena variously labelled in the published history' (2000:465). This is not just a matter of tidiness in dealing with myriad terminology. It also incorporates a theoretical stance with regard to the nature of formulaicity: a common feature manifest across diverse linguistic phenomenon[23].

In an effort to be inclusive, Wray clarifies that the term 'sequence' 'indicates that there is more than one discernible internal unit, of whatever kind' (2002:9), and contends that single words and morphemes can function as a sequence. Indeed, many frequently used discourse markers are single words, and single words are amongst the instructed FSs in the present study. This openness and inclusivity of linguistic form in the identification of FSs distinguishes Wray's approach from many others, such as identification criteria based on frequency counts, idiomacity, or collocation patterns. It is reflective of an approach that views motivation as a critical factor in matters of formulaicity.

Within this model it is clear that 'formulaic and nonformulaic may sometimes look identical' (2000:467) and Wray suggests that 'it is probable that a satisfactory means of identification will entail more than one diagnostic' (2002:467). On grounds of frequency, for instance, Wray argues that, on the one hand frequency is not sufficient to determine if a string is used in a formulaic manner, on the other hand some formulaic sequences may not have high frequency. In addition, she describes the difficulty in establishing boundaries in identifying strings in corpus searches, e.g. *thank you…thank you very much…thank you very much, bye now* (Wray 2002:25).[24] Wray is not especially concerned with surface structure. Her primary

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[23] The term has subsequently been adopted by many important researchers in this field (Boers et al. 2006: Schmitt 2004; Wood 2006) but alas, like futile attempts to behead Hydra, it is not settled: 'different researchers have looked at formulaic sequences and seen different things' (Schmitt 2004).

[24] 'The identification of MWUs poses a problem for corpus linguistics and computational linguistics alike, in that whereas recurring sequences of words can be identified easily, such sequences are

interests are in the functions served by formulaic language and, allied to this, in describing the processes of acquisition, storage and retrieval which distinguish the two language types.

What are the functions served by formulaic language? Wray refers to performance and pragmatics as the two axes of her model of formulaicity (2002:11). Principles related to these fields underpin the assertion noted earlier, that formulaicity is the normal approach to processing. Performance entails cognitive pressure, which may impact negatively on the speaker's ability to speak with fluency. For pragmatic reasons communication needs to be effective. Indeed, promotion of self-interest is seen by Wray to be fundamental to language use. The use of formulaic language is a strategic response to both of these requirements. Language acquisition is driven not by the mapping of innate grammatical concepts onto the world but as a linguistic response to non-linguistic problems: processing pressures, interaction and assertion of self. Formulaic language is thus not a simple set of expressions, 'it is a dynamic response to the demands of language use, and, as such, will manifest differently as those demands vary from moment to moment and from speaker to speaker' (Wray, 2002:5). The benefits of formulaic language will be explored further in Section 3.6.

Wray's descriptions of acquisition, storage and retrieval elaborate a language system comprised of two components with a default setting for one and an interface between both. Instead of a lexical store containing conventionalised and novel items, she postulates 'two interacting systems of storage, retrieval and generation' (2002:467). Lexical retrieval of any specific item can be holistic or analytic. Language development itself involves a dynamic interplay between analytic and holistic processing. The principle of economy (similar to Sinclair's 'economy of effort' principle) means the speaker will operate with the largest possible language unit, hence the default setting for holistic processing, with analytic processes employed on a 'needs only' basis. The term 'prefabricated' in Wray's definition of FSs can refer to sequences initially analysed and, over time, 'fused' as a sequence (Wray cites Peters 1983 for an explanation of this process) but more commonly in Wray's view sequences will have been acquired as a single 'big word' (Ellis's term, cited by Wray 2000:465). Children initially store linguistic input in a holistic manner. Schmitt & Carter (2004:11)) offer qualified support for this view: '[T]here is a consensus that some L1 acquirers do learn and use formulaic sequences before they have mastered the sequences' internal make up' but they go on to detail research which indicates a more complex picture of acquisition, with a considerable degree of individual variation. Peters (1977, 1983) claims a 'gestalt' approach to language acquisition in children is dominant, proceeding from whole

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unlikely to coincide exactly with what a human researcher would accept as a "unit of meaning" in a language' (Danielsson 2007:18).

to parts. She views production of analytic or gestalt as a matter of either communicative need (whether one of labelling or one of social interaction) or individual learning preference over 'analytic' production, and unlike Wray's model, posits a continuum from gestalt to analytic. A system of dual-storage is likewise rejected by Ellis: 'grammatical and lexical knowledge are not stored or processed in different mental modules, but rather form a continuum from heavily entrenched and conventionalized formulaic units… to loosely connected but collaborative elements (2012:25)

Wray argues that at around the age of eight analytical processes come to be employed more, supporting the child's developing lexical and grammatical systems, but that this process reflects their relatively secure and protected social position, with the child operating from within 'a socio-interactional bubble' (Wray & Perkins, 2000:22). As the child moves from the closed world of carers, the relative proportions of holistic and analytic processing change until the balance is settled at adulthood.

It is not surprising that Wray gives a lot of attention to the development of the lexicon, and to specifying its constituents. She proposes that virtually any kind of word string, continuous or a frame with gaps, can be considered a single lexical unit if a) it has a reliable meaning as it stands, and b) the input experienced by the speaker, and his/her output needs, have not required it to be broken down further (Wray 2008a). She describes a lexicon comprised of formulaic word strings, formulaic words, and morphemes while lexical organisation consists of a number of lexical categories e.g. grammatical, interactional and referential. A simplified illustration of lexical content in this model is presented in Table 3.1 (examples taken from Wray 2002:249).

Table 3.1 Illustration of formulaic lexicon in Wray's model

	Grammatical	Referential	Interactional
Formulaic wordstrings	*in order to*	*give* NP *to* NP	*great to see you*
Formulaic words	*because*	*kindness*	*maybe*
Morphemes	*-able*	*dog*	*sure*

Wray's model has been of clear importance in developing our understanding of formulaic language and in furthering a research agenda. She is not interested in the challenge of identifying FSs and her view of the formulaic language lexicon as an open class resolves, by viewing as immaterial, the circularity of the identification – definition process of FSs. The open class of FSs can include single words and morphemes; this alone both radically extends the class and shifts the discussion about formulaic sequences from idiomatic and collocational meaning to meaning more generally. She emphasises the need to give attention

to the processing of FSs and to recognise the important benefits served by formulaic language use. From a language learning perspective, it is important to note and address her detailed concerns about young peoples' and adults learners' acquisition of FSs, and also about instruction in FSs. The latter concerns are considered in Section 3.8.

On the other hand, the interplay between the holistic and analytic systems described by Wray seems peculiarly flat or static. While prefabrication may happen as a result of fusion, this is less typical in Wray's view than acquisition of a string as a whole. In addition, the NSs ability to use strings acquired holistically for analysis is characteristic primarily of children at a particular age and she is not optimistic about this route being productive for adult learners. Her account of strings being analysed to support the developing grammatical systems suggests no more than a basic process of decomposition, thus enabling the production of novel constructions. Seeing formulaic language as a linguistic solution to a nonlinguistic problem, promotion of self, may have hindered an analysis of formulaicity as having a more essential and richer role in language acquisition.

Wray's description of dual-processing is informed by a consideration of how language is shaped by our interactional and social needs, and how formulaic language in particular is critical to meeting these needs. Within usage-based accounts of language, frequently met sequences are also seen to have a dynamic and productive role in the acquisition of language systems.

3.5.2 Usage and frequency

Usage-based models view frequently used sequences in a child's input as central to language development, not for the purpose of rule abstraction but to establish constructions. Frequently recurring sequences in the utterances of the child's carers form the basis of language acquisition. Children imitatively attempt to express communicative intent using these sequences and form-meaning mappings become established. It is stressed by Tomasello that this imitation is not mindless parroting, but is a form of 'cultural learning in which the learner understand the purpose or function of the behaviour she is reproducing' (2000:312). Such mappings may, perhaps, constitute the prototype for constructions, defined by Ellis as follows: '[T]he basic units of language representation are *constructions*. These are form-meaning mappings, conventionalized in the speech community, and entrenched as language knowledge in the learner's mind' (2011:141, emphasis in original). A developing network of such mappings becomes organised by overlaps in form or meaning across these sequences. 'The coexistence in this shared representation space of fragments of language with overlapping phonological and semantic content gives rise to the creation of schematic

patterns,' (Bannard & Lieven 2012:3), these in turn lead to the creation of the lexical and phrasal categories which facilitate linguistic productivity.

Usage-based theory is supported by corpus analysis. Bannard and Lieven cite relevant corpus evidence which shows 'there are a great many multiword sequences that the child repeatedly encounters' (2012:5). It is argued that segmentation of units in the speech stream is carried out by the identification of high probability sound combinations: the frequency of word combinations in input means that this approach will result in the child extracting multi-word combinations. These items do not just become established for children, with high frequency in input they become entrenched, affording some resistance to change and analysis. This process is described by Bybee and Scheibman (1999) as one of frequency leading to fused storage and processing units (cited in Millar 2011:133). Tomasello (2000) reports evidence demonstrating that, when induced to overgeneralize fixed-transitivity verbs, children were less likely to overgeneralize high frequency verbs. Thus from the pairing *come-arrive, I arrived it* was uttered more frequently than *I comed it*.

Corpus evidence also shows that many high frequency word strings generally have simple sentence frames, again facilitating an abstraction process for children. Lieven et al. (2009) give evidence for both establishment of word sequences and productive use of them in recordings of four two-year old children. Following the methodological principle that 'we can never tell from a single utterance in isolation what is the child's underlying structural knowledge' (Tomasello 2000:306), the researchers traced what appears to be a novel utterance in the final recordings for related utterances in previous recordings. They found that very often the novel utterance was modelled on a word sequence used before, furthermore:

> 40–50 percent of their utterances were identical to a previous utterance except for one single point of variation, which could be produced by a single productive operation of inserting material into a prefabricated frame to produce a novel utterance (Bannard & Lieven 2012:7).

The inserted material was in most cases a noun, confirming for the researchers a language development route progressing from stored strings to frames (with slots) for noun category, and subsequent generalizations. Bybee (1995) proposes that creative use indicates a need to distinguish two types of frequency. While token frequency facilitates entrenchment of an expression, type frequency facilitates the child's ability to creatively exploit the potential variations within a construction. Bannard and Lieven (2012) emphasise that evidence shows while the original form-meaning mappings are the basis of the emergent grammar, these mappings 'remain a vital part of a person's knowledge of grammar across the life span,

giving rise to the formulaicity that is so characteristic of language use' (Bannard & Lieven 2012:3)

Ellis's work on frequency effects and sensitivity to sequencing (2002, 2012) might be seen to complement usage-based theory. Frequency effects are examined primarily with regard to language processing. Ellis (2002) reviews studies from a range of research fields (corpus analysis, computations linguistics, discourse, cognitive linguistics, psycholinguistics) investigating the processing of implicit memory across a range of language dimensions (such as morphosyntax, phonology, reading and formulaic language production). Results demonstrate frequency of input is a major predictor of processing efficiency. He allies this with the central role frequency plays in categorization and the establishing of category exemplars, in particular prototypes which 'are judged faster and more accurately, even if they have never been seen before' (Ellis 2002:147). Both Ellis and Bybee (2002) indicate a connection between type frequency and prototype construction.

Ellis postulates a view on language acquisition which describes a path 'from tokens to type to system' driven by input frequency (Ellis 2011:139; see also 2002). Frequency of use prompts the formulaic construction of *token* with '[M]ultiple repetitions….necessary for entrenched representation, ready accessibility, automatized processing, idiomatic autonomy, and fast, fluent, and phonetically reduced production' (2011:145). Frequency also prompts schematic construction of *type,* and it is this construction which underpins linguistic productivity, '[T]he productivity of phonological, morphological, and syntactic patterns is a function of their *type* rather than *token* frequency' (Ellis 2011:145, emphasis added). Ellis's argument is based on principles of Construction Grammar. He cites Bybee and Thompson (1997) in his description of how type frequency facilitates category development, strengthening the representational schema 'thus making it accessible for further use with new items' (2011:146). Ellis suggests research over some 20 years supports this claim, confirming the critical role of frequency in prompting this acquisition route (2012).

Wray argues *why* formulaic language is important in language use. Her account demands that formulaic language is not seen as a static corpus but a dynamic and vital response to processing and pragmatic demands. An account of *how* FSs may be important in our acquisition of language is to be found in usage-based theories and frequency accounts, which emphasise how language acquisition proceeds from sensitivity to, and segmentation of, patterned and recurring sequences. From an L2 perspective, the challenge is to provide input and activities prompting sensitivity to sequence patterning and form-meaning mappings, and that provide the situational contexts which activate holistic processing and production routes.

3.6 Functions and benefits

3.6.1 Prevalence

Functions and benefits of formulaic language have been referred to already in the context of discussion on processing and acquisition. In their discussion of characteristics typical of FSs, Schmitt and Carter note that FSs have a number of functions, making them useful for efficient language use and 'essential for appropriate language use' (2004:10). For Wray developing an understanding of our use of FSs is intrinsic to a description of FSs: these are 'more than simply a linguistic unit, but… a tool that can be put to many uses (Wray & Perkins 2000:9)

Reference has been made through this chapter to the frequency of formulaic language use, with estimates of FSs in naturally occurring spoken language ranging from 32.3% to 58.6% (Conklin & Schmitt 2008, 2012), and many of these sequences occur with recur with high frequency. The frequency of formulaic language attests to the 'native-like selection' described by Pawley and Syder (1983). Famously, they proposed the other side of the coin was 'native-like fluency'. Appropriate use of formulaic language thus both marks a speaker as a member of a speech community and facilitates ease in language production and comprehension. Wray also notes processing and pragmatic benefits, and argues pragmatic use affords processing benefit to the hearer, signalling effectively that the speaker has group membership (Wray, 2000).

Fluency is a central concern in the present research, and processing benefit has already been discussed in the context of empirical studies and theoretical models. The particular processing demands presented by speaking were not noted as part of that discussion. These were briefly indicated in Chapter 1 and specified in Chapter 2 in the context of describing Levelt's model but it is opportune to revisit these with a focus on the speaker, as opposed to speaking. Other functions and benefits relate in the main to aspects of semantic and pragmatic competence. This section concludes with brief comments on the more general role formulaic language may play in language acquisition. A deeper and more comprehensive treatment of SLA and formulaic language is given in the following section.

3.6.2 Speech fluency

Speech generally happens in real time, is typically unplanned and occurs face to face (Carter & McCarthy 2006).These conditions create cognitive and interactional pressures for the speaker. The skill of speaking is in fact comprised of a cluster of microskills and microcompetencies: competence in phonological production, skill in deictics, an appreciation of the appropriate lexical form, adeptness with cohesion devices, the ability to ask someone

politely to open a window, the ability to check the listener understands and to tell the listener you are giving them talk-time (see Appendix 1for list). The demands are many, and the consequences of poor performance are not insignificant. Flouting conversational maxims, pronounced hesitation, laboured delivery may cause friends to query your well-being and work colleagues to look askance. The L2 speaker is generally afforded some indulgence but poor speech fluency can limit both quality and quantity of interaction with NSs.

Typically, one copes. Speaking at a normal speech rate, one produces some 150 words per minute (Levelt 1989). This is not a consistent rate, speech is generally comprised of alternating fluent passages and slower, sometimes more hesitant segments. And while this pattern may not *entirely* conflate with alternating passages of conventionalised and novel utterances, the evidence presented up to now demonstrates both that where formulaic language is used, production is generally more fluent, and that formulaic language is used a great deal; a link between language fluency and language use first asserted by Pawley and Syder (1983).

Speech has been described as constructed like links of a chain (Carter & McCarthy 2006, Pawley & Syder 1983). Each chain, or speech run, is generally made up of a phrase or clause, and clause combination is non-hierarchical, generally through conjunction (Pawley & Syder 1983, Carter & McCarthy 2006, Chafe 1985). Pawley and Syder (1983) note that while the longest runs of novel speech for NSs generally comprised eight to ten words, that many runs of conventionalised speech were longer, and suggest that such items 'form the main building blocks of fluent connected speech' (1983: 214). The connection is neatly surmised by Nattinger and DeCarrico (1992:32): 'it is our ability to use lexical phrases… that helps us speak with fluency'. Both Pawley and Syder (1983) and Nattinger and DeCarrico (1992) give numerous examples of phrases and sentence stems conventionalised and known by NSs which are extensively used in speech.

FSs facilitate fluency by easing the processing burden on the speaker, as already discussed. They are already assembled, prefabricated and available for quick retrieval. In addition, they are available for *apt* use: acquisition entailing knowledge of discourse role, pragmatic function, and conventionalised meaning. They allow the speaker important planning time. While uttering the conventionalised expression, which, once initiated, can 'self-complete', the speaker can think ahead. The formulaic sequence thus constitutes what Dechert et al. (1984:227) aptly called 'islands of reliability' in the speech flow, a place where learners (and NSs) 'may anchor the processes necessary for planning and executing speech in real time' (Conklin & Schmitt 2012:47).

The various ways in which highly conventionalised routines, and discourse markers in particular, contribute to fluency in speaking are illustrated by examples given in the coming sections: managing interaction, managing discourse, managing meaning. The next two sections are informed in particular by Carter and McCarthy (2006).

3.6.3 Managing interaction

Conversational interaction involves negotiation of meaning, negotiation of the discourse unit that is the conversation and maintenance of interactional demands. Gesture and expression play an important role in this but the conversational partners also have a stock of conventionalised linguistic phrases that facilitate this interaction and are well documented in the field of conversation analysis. Conversation may be transactional (giving information, getting business done) or interactional (supporting relationships) (Brown & Yule 1983). It is frequently a combination, but can be characterised as mainly one or the other. Successful negotiation requires competence in context-appropriate speech acts, politeness and turn-management. These tasks are all well served by a repertoire of familiar expressions, from basic adjacency pairs *thank you/you're welcome* to nuanced topic shifts, *oh that reminds me.* The familiarity of formulaic sequences assists the joint construction of a conversation by participants; for example the routines of conversational openings are learned early in language acquisition. Some routine conversational functions and relevant phrases are given below:

Politeness	*if you don't mind, do you think you could*
Clarifying	*what I mean is, not quite like that*
Vagueness	*kind of, sort of, a bit*
Hedging	*I suppose, perhaps*
Shared knowledge	*you know, sure you know yourself*
Turn-taking	*actually, I know what you mean, what do you reckon?*

Vagueness and hedging soften expression so that the speaker does not come across as too assertive or authoritative. Perhaps because accuracy and precision is generally valued over imprecision, vagueness can be ignored in language textbooks. The present researcher is not aware of any school textbooks that give treatment to vague language or hedging terms in Irish and such terms do indeed exist in the language. Comments made by Carter and McCarthy are worth noting: 'vagueness is motivated and purposeful and is often a mark of the sensitivity and skill of a speaker' (2006:201). Conversational interaction demands fine judgement on interactional grounds and linguistic tact. These requirements are well supported by FSs.

3.6.4 Managing discourse

A conversation is, of course, a discourse. All discourse employ linguistic devices, routinized phrases to support organisation of the text. In written discourse, discourse markers are used

to enhance the coherence and cohesion of a text. An analogous process characterises spoken discourse, 'marking a discourse routine at various points with discourse moves expected by one's interlocutor in a given context is likely to help predict where the talk is leading, to interpret what is being said, and to help the unfolding of the discourse' (Bygate 2006:166). In spoken discourse, as well as delineating conversation structure, discourse markers are often very strong indicators of register and feeling. Discourse markers can also be used to manage the flow of information in a way that allows planning time for speakers, saying *I don't think there's anything else* protects the speaker's turn just in case 'something else' does come to mind. Some general discourse functions are listed below, with examples of FSs frequently used in these roles.

Topic nomination	*did you hear about, wait till I tell you*
Topic opening	*right, okay*
Topic shift	*anyway, by the way*
Return to topic	*so, anyway*
Repairs	*no, what I mean is*
Topic elaboration	*I mean, as well as that*
Topic turn	*what do you think yourself*
Topic closing	*that's it, that's about it*
Stance	*really, I think, of course*
Fillers	*well, right, okay*

Single item discourse markers are the most frequently used in English (Carter & McCarthy 2006). Hasselgreen calls these 'small words' and claims they are particularly useful in prompting fluency; they occur with high frequency and 'help to keep our speech flowing, yet do not contribute essentially to the message itself' (2004:4). There is frequent code-switching and use of many English discourse markers, particularly single word items, *okay, well, right, just, so* by NSs of Irish (Ó Curnáin 2012). Personal experience suggests that learners, particularly young students, tend not to do this. Code-switching requires a degree of confidence in the speaker. One suspects, also, that the classroom context might discourage such use.

A list of most the frequent collocations in spoken English (Shin & Nation 2008), derived from the British National Corpus, makes clear that shorter collocations are by far the most frequently used. Two-word collocations make up 77% of the total number of collocations and typically these use short words. The top two collocations, charmingly paired, are *you know, I think (that)*. These phrases occur 27,348 and 25,862 times respectively in 10 million running words, with the third most frequent, *a bit* occurring a mere 7,766 times. *You know* has a strong interactional function, as well as being used as a filler. *I think (that)* is used, as indicated above, to convey stance but can also be used to initiate turn-taking and to have a politeness role.

With regard to the overall structuring of discourse, we noted earlier Schmidt's comments on 'the ways in which creative and routine elements may vary in fluent speech – for example, when formulaic utterances fill slots within a larger discourse pattern or when formulaic frames themselves have open slots' (1992:375). This variation itself may be patterned and a feature of discourse that is familiar and expected. The higher the proportion of novel utterances, the more dense in information and demanding the discourse is likely to be. Of course, overuse of formulaic expressions may create an impression of blandness or even insincerity. Appendix 2 is a brief illustration of effective use of the formulaic. A confessional moment is described succinctly and sincerely by a highly accomplished TV presenter, and supported through natural use of formulaic language.

3.6.5 Managing meaning

Krashen's understanding of the use of 'automatic speech' (underpinning routines and patterns) as having 'a more limited use in actual speech performance than propositional language' (Krashen & Scarcella 1978:289) might be seen to reflect a conflation of *authentic* with *creative,* and a privileging of propositional meaning over any other. It has been convincingly refuted by corpus evidence. Form-meaning mappings in speech can be highly idiomatic, subtle, suggestive and context-dependent. The importance of frequency in establishing form-meaning mappings for NSs has been discussed; developing even an understanding of the various nuances carried by formulaic language can be challenging for the NNS, not to speak of competence in their production.

In discussing the idiom principle, the notion of semantic prosody was introduced, when usage of a word carries an attitudinal or pragmatic meaning. Chunks such as *accidents happen, I don't really get that idea, it makes me mad* readily express reassurance, puzzlement or uncertainty, and anger. Intonation, course, would help settle any ambiguity for the hearer as to precise meaning, and strength of feeling. These mappings are not easily realized or acquired for the learner, particularly in a classroom context lacking authentic input and the communicative need. Pragmatic meaning broadens the discussion of benefit further to a consideration of identity and speech communities, which will now be considered.

3.6.6 Pragmatic: situation and community

Formulaicity is a consequence of usage. We often find ourselves in 'similar situations', there is daily routine and social organisation, there are regular social encounters. Sinclair posited such recurrence, with the pressure of conversational exigencies, as contributing to ways of describing situations frequently encountered becoming adopted and conventionalised within a society. In brief, the more recurrent a language need, the more likely there is a FS to express it. Negotiating routine encounters is eased with phatic expressions, intrinsically

formulaic, *how are things? good and yourself?* Pawley and Syder likewise claim 'holistically stored sequences…provide convenient ways of referring to those concepts that happen to be salient in a particular culture and which are not provided for by the stock of unitary lexical items' (1983:218). Even single words, such as vagueness terms like *so, well* can carry pragmatic weight; vagueness 'is a marker of an assumed shared knowledge and can mark in-group membership' (Carter & McCarthy 2006:201).

There is a substantial body of research on the principles of pragmatic language usage, extending the foundational work of Austin, Grice and Searle. The effective use of FSs must meet the pragmatic and communicative demands in any given social situation. Formulaic sequences are conventionalised within a given speech community and there is a strong pragmatic component to the use of many. In many of the taxonomies and catalogues of formulaic sequences we are given lists of phrases that have clear pragmatic function such as *how do you do, I'm sorry to keep you waiting.* Wood (2002:8) concludes from his survey:

> it appears that, typically, formulas are used in situations with highly specific and regularly occurring and continuing patterns of behaviour and communication. They help one cope with the complexity of many social situations, help structure orderly and unambiguous communication, and help with a sense of group identity.

It was noted above that FSs are conventionalised within a speech community. Bardovi-Harlig (2009) and Wray (2002, 2008a) strongly argue that the appropriate use of FSs positions the speaker's identity within a particular group, and also allow an individual to express their affiliation with a group. These poles of individual assertion and group identity can both be met by formulaic sequences, according to Wray: '[F]ormulaic sequences can be used to assert both our individual and our group identity. They enable us to make statements about our sameness and difference, and to jostle for position within the hierarchy' (2000:477). Examples of FSs used to assert group identity are chants, *come on ye boys in green* and 'in' phrases.

Bardovi-Harlig considers competence in conventionalised expressions to be a type of 'pragmalinguistic resource' (2009:756). In the same article, Bardovi-Harlig investigates the underuse of conventional expressions in L2 pragmatics. This might well describe the experience of some young people learning Irish. As a teacher of Irish I am aware of a palpable feeling within students that they lack, and are unlikely to develop within school, the linguistic resources either to assert themselves or to establish a sense of identity with a group fostered through the medium of Irish. A consequence of this may be that Irish is seen by some as an exam subject only, rather than as a living language and part of a cultural heritage.

3.6.7 Language acquisition

The linguistic accounts of formulaic language presented in Section 3.5 incorporate a description of language acquisition that proceeds from holistic storage of sequences. It is not necessary to revisit the arguments; in summary, sequences may facilitate acquisition through hierarchical chunking (Schmidt 1992, Ellis 2011), through generation of schemata and frames (Tomasello 2000, 2002) or through decomposition and analysis (Peters 1983, Wray 2002). Above all, sensitivity to sequence frequency seems to be a dominant prompter of linguistic development in phonology, lexis and phrase syntax.

This survey of function and benefit concludes the first part of this chapter, a general presentation of formulaic language. Theoretical models and psycholinguistic research have not resolved questions on whether formulaic language use arises from dual-processing of language or is better understood within a usage-based model, though the evidence for frequency effects seems to favour studying formulaicity from a developmental and usage-based perspective. It is incontrovertible that formulaic language is ubiquitous and has diverse benefits for native speakers. The case of formulaic language and the language learner is central to the second part of this chapter.

3.7 SLA and formulaic language

Marked frequency of use, a range of discourse functions, significant interactional importance, an ease of processing: a compelling case is easily made for the benefits to non-native speakers in acquiring competence in the comprehension and use of FS on performance and pragmatic grounds. Questions immediately arise. To what degree is it possible for a language learner to develop competence in formulaic language? Can it be assumed that benefits for L1 use of formulaic language transfer easily to L2 use? Or is the situation with regard to L2 use of a different order, more complex and more challenging? Is it possible for FS use to be taught?

This discussion commences with a review of accounts of formulaic language and the L2. Research on acquisition and use is presented, along with theoretical considerations, these relate in particular to the models of Wray and Ellis with a focus on the questions of analysis and productivity. This is followed by a general consideration of the possible benefits of formulaic language for the learner, including any benefits indicated by research already presented. It will be argued that the potential benefits to learners *and* the attested difficulties posed by formulaic language for learners make a strong case for formulaic language to be a part of the language learning syllabus. The chapter concludes with a discussion on questions

of methodologies, materials and brief comments on other considerations for the language learning classroom.

3.7.1 Learner acquisition: holistic or analytic?

Insufficient research means that claims regarding either the acquisition path of formulaic sequences, or the benefits of FS acquisition on overall L2 development, are less confident than claims for effects on performance, noted in Section 3.7.4. Schmitt and Carter conclude that the research indicates a complex picture: 'there may well be an underlying systematicity to the acquisition and use of L2, but there is simply not enough focused research at present to say very much with conviction' (2004:13). Recent research on instruction effects does give some interesting insights but the primary focus of these studies, which are presented in Chapter 4, is not on the acquisition process.

Exploring L2 acquisition of FSs and its effect on L2 language development brings to the fore a question which has been raised in this chapter: the relationship between analytic and holistic processes and the contention that analytic processes engaged in by learners may conflict with FS competence. While the question has been raised earlier, it is necessary to give some attention to it now as the issue has obvious implications for classroom approaches.

The debate on the interplay in L2 development between controlled and automatic processing is seen by Myles et al. (1998) as a question of:

> whether learners gradually "unpack" the initially unanalysed utterance and begin to use parts of the utterance productively to generate new utterances, or whether they merely drop such rote-learned utterances from their speech repertoire as their creative, rule-governed competence develops along a different route' (Myles et al. 1998:327).

If the latter is the case, it implies FSs are of use to the learner at earlier stages as a communicative strategy primarily. Wray argues this is the more likely case for learners. Wray sees holistic and analytic processes not as alternative but as oppositional and conflicting. Where analytic processes dominate, this hinders the effective acquisition of formulaic sequences, i.e. their storage as chunks or fused form-meaning mappings. Wray postulates very different FS acquisition paths for NSs and NNSs, due primarily to differing linguistic resources and contextual or social, demands. Learners have generally acquired literacy, which predisposes the learner 'to deliberately aim to acquire a lexicon of word-sized units' (Wray 2002:206). Social interaction interests prompt use of formulaic language by native speakers, but second language learners, particularly in a classroom environment, may not often experience genuine communicative needs of this nature. Different acquisition paths, one holistic and communicatively driven, the other analytic and lacking communicative purpose, result in a different lexicon composition. Wordstrings consequently

become significantly underrepresented in the NNS lexicon and this presents still more challenges for learners in terms of lexical choice. Wray (2002) illustrates with the example of a NS production of the string *major catastrophe*. A NNS will have stored *major* (a word meaning 'big') and *catastrophe*, (a word meaning *disaster*), separately and consequently might produce pairings like a *large catastrophe* or a *major toe*). Fundamentally, analytic processing is seen by Wray to conflict with the acquisition and production of FSs *as* FSs.

Wray highlights literacy and communicative pressure as militating against holistic acquisition. On the other hand, Myles et al. (1998) give evidence of chunk breakdown in a classroom but attributed this breakdown to communicative need (the need to establish reference), and claim the segmentation of the chunk facilitated grammatical development and creative constructions. Wood suggests greater variation in adult acquisition routes may reflect a variety of factors, including individual differences, 'the established cognitive and learning styles of adults makes for more variety in the route of language acquisition generally and with regard to use of formulaic sequences specifically' (Wood 2002:6) but admits this may not necessarily being of benefit for some. Schmitt and Carter suggest separating questions of lexical storage and acquisition; '[F]ormulaic sequences appear to be stored in the mind as holistic units, but they may not be acquired in an all-or-nothing manner' (2004:4). Pragmatically, this is a particularly useful proposal. In terms of developing instructional approaches it suggests there may be a role for activities that prompt chunking processes along with activities that prompt analysis.

Alternatives to a dichotomous holistic-analytic model exist. As suggested by Schmitt and Carter (2004:4), it is possible for a continuum to exist between the different processing types. In Chapter 2, for example, we examined research that, in various ways, argued for a strong interface and dynamic interplay between procedural and declarative knowledge. It is also possible for different processing routes to co-exist. An influential model proposed by Bialystok and Ryan (1985) separates skill use and internal linguistic description. They describe SLA as taking place concurrently on two dimensions: control – analysis and controlled – automatic processes. Development in *analysis* describes an increasing complexity in linguistic knowledge, with internal representations being restructured and becoming explicit. Development in *automatic processes* on the other hand, refers to an increased efficiency, an automaticity, in language use. This is particularly interesting in light of the present research study which fosters explicit noticing and attention of FSs, their form, meaning and contextualised use, but with an overall objective of improving fluency through practice routines. Skehan (1998) supports a focus on rules *and* routines, asserting that while language is rule-based, for the language user language is also exemplar-based. The usage-

based theory of language acquisition, we have seen, argues that exemplars form the basis for language acquisition.

Ellis also argues for the possibility of analysis and holistic processes to have complementary roles in language acquisition, and that chunk segmentation does not necessarily entail chunk destruction. Ellis (2002, 2011) describes a progression from chunking to creative use, accompanied by a possible degrading or a strengthening of chunks. This theory is succinctly presented by Forsberg in an SLA context (2010). While initial acquisition of FSs is by chunking, chunks progressively become analysed with frequency in input, general patterns are extracted, and this enables creative construction, a process perhaps analogous to schema development in usage-based theories. Ellis acknowledges the processing benefit of chunk use and contends that, notwithstanding analysis, it is possible for FSs still to be stored as chunks. This entails consolidating the FS. Forsberg describes this consolidation as follows: 'formulaic sequences need *gradual strengthening* in order to become automatized and entrenched in the mental lexicon' (2010:52, emphasis in original), though she does not specify what this might entail. Forsberg concludes there are, therefore, two processes involved in FS learning: holistic chunking and incremental automatization.

3.7.2 The formulaic route to creativity

One might argue that due cognisance needs to be given to a third process, in addition to the two described by Forsberg above, that of pattern extraction for creative use. More needs to be said about the role FSs can play in novel utterances and in L2 grammatical development.

Many FSs have open slots or permit a degree of variation. While usage-based theory claims abstraction of schema arises through input frequency and in the context of the child's developing linguistic competence, the NNS is unlikely to have similar input frequency and comes to language learning with linguistic competence in their native language already established. If creative use of sentence stems, for instance, is prompted through a process of conscious noticing and analysis of open slots, this potentially can degrade these chunks, as admitted by Ellis (2002, 2011) and implies the acquisition path of FSs by NNSs may be quite complex.

The term 'sentences stems' will be used here to refer to FSs that can be structurally described as productive frames, with slots for open class items – novel referential items or morphological inflection. Sentence stems are considered to be of strong potential value to learners. In Nattinger and De Carrico's (1992) taxonomy of lexical phrases they exhibit the most possibility for variation and discontinuity. Sentence stems are productive across a

variety of pragmatic settings. They can provide a ready-made frame for sentence constructions. It is argued that sentence stems 'offer the greatest potential for a lexical phrase approach to teaching' (Nattinger & DeCarrico 1992:45, see also Chambers 1997, Myles et al. 1998, Pawley & Syder 1983, Towell et al. 1996). Chambers (1997) details some of these benefits. She corroborates Towell et al.'s (1996) findings on the use of 'double marquage', and, commenting on a sentence from NNS data, *il y a un film que j'ai beaucoup aimé, c'est…* states this sentence not only sounds more natural to NSs but the structure :

> allows a vast number of sentences by simply substituting the noun and the verb. It provides a frame to build new sentences. Moreover the part which is fixed requires less conscious processing and allows time to fabricate the rest of the sentence (1997:542).

The productive dimension of sentence stems is an obvious benefit to their acquisition. These phrases are simultaneously *lexicalised* and *have open slots.* The sentence stem is, therefore, a complex FS, and treating sentence stems in the classroom poses more general questions about chunk size and acquisition path.

Dörnyei and Kormos (1998) raise an immediate question with regard to storage of lexical items that are not fixed. Within Levelt's model, items that are structurally fixed would be stored as single lexical entries. Noting that many FSs are not completely fixed, structurally or semantically, retrieval can pose a challenge for learners: 'one problem type… unique to idiomatic strings, particularly variable ones, is their partial or incorrect retrieval' (1998:377).

'[N]othing is broken down unless there is a specific reason' (Wray 2008a:17); this is the principle at the core of Wray's model of formulaicity. Wray does not deny that sentence stems might be stored in the lexicon as wordstring + morpheme; the crux of her argument is that production of the sentence stem is *not* through rule application but through lexical retrieval. She is doubtful whether a sentence stem can be retrieved as a FS, and usefully analysed:

> [T]he effect of formulaicity on strings is to protect them from all but very occasional internal inspection, and subtle distributional restrictions easily arise as a function of idiomaticity. This makes all formulaic sequences potentially unreliable for analysis (Wray 2000:485).

Myles et al.'s longitudinal study of beginner learners of French, mentioned earlier, gives evidence for chunk breakdown with segmentation. This chunk breakdown was driven by communicative pressures but, in tandem with explicit instruction it must be said, facilitated grammatical development: 'far from dropping the chunks from their interlanguage at this stage, the learners actively "worked on" them, and fed them directly into the creative

construction process' (1998:359).

While Ellis admits chunks can be degraded by analysis, he also postulates a route from token to type to system (2011), noted in Section 3.5.2 As described by Ellis, type frequency facilitates category development, strengthening the representational schema 'thus making it accessible for further use with new items' (2011:146): in other words, productive use.

Ellis's comment on grammatical words in schema is interesting in the context of the present discussion. These words, he states, have the highest frequency and the highest connectivity in a language, they are of importance in allowing parsing of schema, and 'help to bring out the commonalities of the adjacent slot-fillers' (2011:146). It is these 'little words' that can typically cause learners difficulty[25]. Schema development may help learners familiarise themselves with the subtlety of their form-function mappings and may also be a significant 'pay-off' for learners in leading them to the productivity path, as described by Ellis. More generally, schema abstraction in this framework might be seen as a part of language acquisition and interlanguage development, and to contribute in an important manner to the systematicity of acquisition. A tentative conclusion, but one needing applied research, is that there seems to be two routes to creativity and productivity: one by analysis and the other by schema; and that analysis may also lead to chunk degrading.

Ellis's description of schematic development offers an interesting perspective on sentence stems and suggests these items may be usefully treated in the classroom, but that pattern drills are probably not particularly effective; after all 'it is their communicative function, semantic, pragmatic, or discursive, that motivate [construction] learning' (Ellis 2011:147)[26]. Some recent studies have explored the application of construction learning to classroom instruction (Robinson & Ellis 2008). With regard to 'optimizing instruction samples for construction learning', for example, Ellis suggests introducing a new construction by:

> using an initial, low-variance sample centered upon proto-typical exemplars to allow learners to get a "fix" on the central tendency that will account for most of the category members. Tokens that are more frequent have stronger representation in memory, and serve as the analogical basis for forming novel instances of the category (2011:150-151).

Novelty, then, results from application by analogy, rather than analysis; the value of token formulaicity is thus enhanced rather than compromised by schema development.

Syntactically incomplete chunks may indeed contribute to the acquisition of a learner's

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[25] Contra Joyce, 'I fear those big words, Stephen said, which make us so unhappy' (*Ulysses*).
[26] See Section 3.5.2 for Ellis's definition of constructions.

grammar in ways unforeseen. Emergent grammar, for instance, 'considers fragments to be important clues as to how interaction unfolds and how grammar emerges rather than being pre-existent in interaction' (O'Keeffe et al. 2007:70). From this perspective, the learning of grammar is not driven by abstract paradigms, the rule-based description of a sequence. The grammar is delivered by the language itself in use. Use gives both the grammar to be abstracted and the pragmatic frame wherein it is used. To return to Schmidt's remarks on 'the ways in which creative and routine elements may vary in fluent speech' (1992:375), chunks themselves need to be syntactically and pragmatically congruent – and may form a frame for the syntactic placement of the novel.

Both Ellis and O'Keeffe thus indicate a route to abstraction from chunks that does not entail segmentation by rule. Regarding rules, Schmitt and Carter refer to pattern-based models of acquisition, 'which posit that the human facility for language learning is based on the ability to extract patterns from input' and that while learners may at some point be able to articulate a rule describing this pattern, 'the rule is an artefact of the pattern-based learning, rather than the underlying source of learning' (2004:13-14). Weinert cites a number of researchers who, she claims, 'suggest that language is a continuum of the formulaic and the creative' (1995:198) and quotes from Langacker in this context:

> Speakers do not necessarily forget the forms they already know once the rule is extracted, nor does the rule preclude their learning additional forms as established units…Out of this sea of particularity speakers extract whatever generalizations they can (Langacker:1987:46).

Finally, we turn to brief arguments that analysis may not always be that useful in fostering use of FSs. Schmitt (2005-6) raises interesting questions about the storage of formulaic sequences. He argues that the stock of FSs is far from homogenous, and that some are subject to considerable variation in use while others are relatively fixed. Surprisingly, he argues that idioms, e.g. *scrape the bottom of the barrel*, are subject to a high degree of variation in use whereas variable expressions or phrases with slots (e.g. *think nothing* of), and lexical bundles or extended collocations (e.g. *have a look at*) are in fact quite fixed and stable,

Examining use of *scrape the bottom of the barrel*, Schmitt cites corpus evidence of transposition, *began to scrape the theoretical barrel-bottom,* and ellipsis of items, *he'd have to scrape the barrel, down to the bottom of the barrel*. Schmitt used a gap-fill exercise with NSs to identify the minimal elements of recognition for different types of variable expressions. He found that idioms in context could be easily recognised with only some elements supplied whereas with variable expressions most of the fixed elements needed to be

present. Schmitt postulates that different types of FSs may be stored differently, with idioms possibly stored in template form, whereas phrases with slots and lexical bundles might be stored holistically *because* there is less variation in actual use. Schmitt believes teaching phrases with slots may be worthwhile because:

> Variable expressions are closely connected with the expression of particular meanings or functions, and so tend to be recurrent and useful. If only one or a few variants need to be addressed, this is a manageable learning burden considering the communicative benefits received (Schmitt 2005-6:37).

Of course, conventionalised mapping of form, function *and* situation may mean it is not always of benefit for learners to analyse formulaic sequences. Porto gives an example of the conditional phrase, like *if I were* + a given person, and says 'this phrase may be available for ready access since it is associated with certain situations and has a particular function (expressing advice)' (1998:22). The conditional mood is known to fill many students of Irish with dread; it has complex grammatical inflection and is typically treated using remote hypothetical contexts in textbooks, *if I was the Minister for Education*. Students generally find it easier and more natural to use the chunks *bheadh sé* + ADV, 'it would be', *d'fhéadfadh sé a bheith* + ADV, 'it could be' in the context of talking about a forthcoming event in their own lives, or a current situation.

3.7.3 Difficulties for learners

Learners typically have difficulty in developing competence in formulaic language. Difficulties exist with regard to recognition, selection and appropriate use of formulaic sequences. FSs are ubiquitous in use but they may, nevertheless, lack saliency for the formulaic language learner. This, of course, suggests a potential requirement for instructional intervention of some form – but of what kind? On the other hand the sheer volume of FSs can overwhelm the learner. Idioms and collocations can be semantically opaque, syntactically idiosyncratic, and pragmatically sensitive and subtle. It is no surprise that L2 speakers frequently avoid idiomatic language (Keshavarz & Salim 2007, Liu 2010, Nesselhauf 2003). There is evidence for difficulties in areas such as processing (Conklin & Schmitt 2012, Underwood et al. 2004, Van Lancker Sidtis 2012), recognition (Bishop 2005, Ellis & Vlach (2008), use of collocations and idioms (Alali & Schmitt 2012, Keshavarz & Salimi 2007), accurate production of FSs (Millar 2011) and use (Bardovi-Harlig 2009).

L1 influence

Spottl and McCarthy (2004) found that knowledge of an expression in one language could affect the way it was learned in the target language. Nesselhauf (2003) established in her study that L1 had a strong degree of influence on advanced learners' use of collocations, particularly where there was non-congruence between L1 and L2. Trillo (2002) discovered in

the English language corpus he examined that the attention-getting discourse marker *listen* was not used at all by NS children, but in non-native corpora (Spanish children) was used frequently, and in preference to the more polite *look*. He contends this is L1 interference: 'the Spanish direct translation of "listen" (*oye*) is not considered impolite and is indeed very frequent in Spanish conversations' (Trillo 2002:779).

Underuse and overuse

Pragmatic problems with regard to inappropriate use of formulaic sequences, overgeneralization[27] and fossilization in L2 speakers are well-documented (Bardovi-Harlig 2009, Hall 2009, Trillo 2002). Raupach argues that:

> …the learners' repertoire of organizing formulae is relatively restricted; consequently, certain formulaic items and schemata occur with excessive frequency, so that even if their form is not erroneous, their stereotyped use often results in non-idiomatic performances (Raupach 1984:134).

Bybee states that fossilization is the downside to chunk formation, 'a learner repeats a sequence frequently but incorrectly and it is very difficult to change the internal structure of this chunk once it has become automatized' (2008:221). Trillo's research explores the pragmatic use of discourse markers that are frequently used and important in social interaction, such as *you know, I mean, well.* He found significant underuse of these markers, even in speakers with good grammatical proficiency in the L2. Schmitt and Carter (2004) survey studies which indicate a tendency for L2 speakers both to stick to familiar sequences, and to overuse familiar sequences. Agreement tends to be expressed by NSs with phrases such as *that's right, that's true,* and disagreement with *then again, yeah but* (Foster cited in Bygate 2001). NSs have been found to use the verb *agree* quite rarely; in contrast NNSs are fond of using a variety of expressions employing the verb.

Bardovi-Harlig (2009) refers to interlanguage pragmatic research which has shown that learners frequently have difficulty in developing competency in FS use. She investigated the relationship between recognition of conventional expressions (her preferred term) and production, in particular the 'reported underuse of conventional expressions in L2 pragmatics' (2009:756). Apart from difficulties with recognition, she suggests there may be a number of factors for this underuse, including principles identified in other areas of L2 linguistic development: '[S]pecifically, the one-to-one principle[28] may encourage some learners to use expressions they know rather than expand their range of expressions'

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[27] 'Overgeneralization may be manifest as the use of one conventional expression in place of another unrelated expression or as the use of expressions that share the same lexical and syntactic base but with minor differences in form' (Bardovi-Harlig 2009:783).
[28] One form to one meaning or function.

(Bardovi-Harlig 2009:782). She illustrates with examples of learners consistently using *thank you* expressions instead of pragmatically more apt expressions of gratitude, *that'd be great* or *thanks for inviting me.* In general, she found 'learner responses were both less nuanced and more repetitive than those provided by the NSs' (2009:783).

Pragmatic competence 'does not consist of a series of rules…but rather of a cline of appropriateness or acceptability' (Trillo 2002:770). Acquiring native-like pragmatic competence may well be a never-ending journey. Indeed, for native speakers the same may hold, through the course of our lives we find ourselves in unfamiliar situations, playing new roles, and contending with changing norms of linguistic appropriateness and acceptability. But challenges for learners in developing pragmatic competence are also challenges for the classroom. With regard to the language classroom, Trillo states that the decontextualized nature of the teaching environment, and the fact that there is often no explicit relationship made between form and function, means:

> there is a need to investigate and teach the pragmatic function in relation to the cultural specificity of a language, ranging from the most transparent cases, such as lexicalized politeness phenomena, to the least obvious, such as the functions of discourse markers in conversation (Trillo 2002:771).

Discourse markers which are institutionalised in a speech community, such as *well, anyway, so, right,* 'cannot be explicated simply by statements of context-independent content: rather one has to refer to pragmatic concepts like relevance, implicature, or discourse structure' (Levinson 1983:33). Such functions are made more transparent again when students work with authentic language texts, spoken or written, and can examine the contextualised use of discourse markers within a speech community.

The concept of chunks having pragmatic integrity therefore makes a compelling case for such treatment in the classroom (O'Keeffe et al. 2007). Frequently occurring chunks such as *I think it's* or *a bit of a* are regarded as syntactic fragments, or incomplete structures in conventional grammars[29] and may not be given strong focus for this reason. But a cursory examination reveals the reason for the high frequency of some chunks in spoken corpora is clearly because of pragmatic function. If such chunks are treated in terms of their lexical or grammatical qualities alone, we overlook that which gives them value to speakers, their pragmatic integrity. Thus O'Keeffe et al. describe how 'speakers routinely downtone utterances with *a bit (of a)* (e.g. *it's a bit late, it was a bit of a mess); and how *I think* regularly functions in hedging (2007:71). In the teaching of Irish phrases such as *ceapaim, is dóigh liom* 'I think, I suppose' are generally given grammatical attention, as reported speech

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[29] O'Keeffe et al. (2007:70) point to Emergent Grammar for a different perspective

is marked by inflectional change in Irish. Notwithstanding this attention to form, errors continue to be common. With regards to pedagogical approaches, the authors suggest '[I]t is perhaps more helpful to see… grammatically incomplete strings as "frames" to which new, unpredictable content can be attached' (2007:71), a suggestion returned to in Section 7.5.

O'Keeffe et al. (2007) note categories among pragmatic chunks, a categorisation which is of value in selecting formulaic sequences for attention and which will be returned to in the discussion on the research design:

> such categories would include discourse marking, the preservation of face and the expression of politeness, acts of hedging and purposive vagueness, all of which refer to the speaker-listener world rather than the content or propositional world (2007:71).

Irish exhibits a high degree of code-switching, in particular in the use of English discourse markers such as *well, you know, I mean, just, actually* (Ó Malley 2001). However, it is the researcher's own view (unfortunately there is no substantial corpus of learner spoken Irish as yet available) [30] that learners underuse frequently used chunks such as *cuid de, a leithéidí, píosa, sách, meas tú, n'fheadar* 'some, such as, fairly, would you say, I wonder'. Identifying items of this nature may be helpful in compiling a phrase list for consideration in the classroom, a matter returned to in Chapter 7, but it is the signalling of interactional and pragmatic context which suggests more meaningful approaches to instruction. When students are presented with phrases in a list, they may well notice *n'fheadar* amongst them. If, however they meet *n'fheadar* in a recording of a conversation, interactional and pragmatic context is provided in a manner which renders the phrase more interesting and meaningful. A footballer is interviewed on an upcoming game and is not willing to commit himself. The probing question, the expression of reluctance in tone and intonation and the ensuing elaboration, '*sure it's anyone's call',* make meaning and use pretty clear.

Interlanguage development

Peters (1983) described L1 acquisition as commencing with selecting unanalysed chunks to fit routine situations, and the gradual application of grammatical rules to these chunks. The nature of the changing relationship between lexis and grammar as language is acquired may well be very different between NSs and NNSs. If so, it is important for studies on the impact of formulaic sequence learning on an emergent L2 grammatical system. In relation to instruction effect, a more fundamental research gap, perhaps, relates to the influence of interlanguage development on acquisition of FSs.

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[30] O'Duibhir (2009) in his PhD research recorded a corpus of some 35000 words, of sixth-class primary school puils, this study is not longitudinal.

Analysis of accuracy of production may be useful in such research. Yorio (1989), examining written L2 data, noted many grammatical errors in the use of FSs, e.g. *with my own experience, put more attention to,* and concluded the FSs were not memorized whole but were 'subject to whatever interlanguage rules the learner [was] operating under' (1989:63). In a more recent study Bardovi-Harlig analysed interlanguage forms produced by learners and suggested 'at some stages in acquisition these strings are produced by the interlanguage grammar' (2009:784). She claims level of grammatical development was also a factor in learners' low recognition of 'conventional expressions', a result 'consistent with other studies that show that native-like use of other collocations may come at relatively advanced stages' (2009:784). Wray is also interested in exploring the phenomenon of errors with FSs in terms of what it reveals about L2 acquisition of FSs. While acknowledging L2 stage of development as a factor in such errors, she suggests a number of other possibilities, including insufficient frequency of FS input and learners analysing FSs for lexical but not for grammatical content (2002:200). Overall, Wray contends that learner age is a dominant factor in determining how learners acquire FSs, one that can pose difficulties for successful (in Wray's view, holistic) acquisition by teenagers and adults (2002, 2008a). It is not, however, age *per se* that creates obstacles, she argues, but age-related goals, learning environment, and learning experience.

While it is probably uncontroversial that learners can use FSs to scaffold their way in L2 acquisition (more is said on this in the next section), there is not a great deal known about the specific impact of FSs on language acquisition and on the learner's interlanguage development. There is also a need for research on competence levels and saliency of FSs in input, and on possible changes to the internal representation of FSs as a result both of usage and as a factor of competence. Long's general comment on the learners' readiness to learn is apt balance to Wray's focus on context.

> Students do not – in fact, cannot – learn (as opposed to learn about) target forms and structures on demand, when and how teachers or a textbook decree that they should, but only when they are developmentally ready to do so. Instruction can facilitate development, but needs to be provided with respect for, and in harmony with, the learner's powerful cognitive contribution to the acquisition process (Long 2011:378).

It is unfortunate that much of the research on interlanguage development appears to be focused on linguistic accuracy and acquisition of grammar (see Ortega, 2011 for review). However, process of interlanguage development does not present an argument against instruction in formulaic sequences, but an argument against the efficacy of such instruction unless it is oriented to the stage of learners' interlanguage development.

3.7.4 Benefits

Section 3.6 presented various benefits arising from formulaic language use for NSs; in

summary these are ease of processing and fluency, the management of interaction and discourse, the expression of meaning, the expression of self-identity and affiliation with a speech community, and the facilitation of language acquisition.

There is evidence of processing benefits for learners, but not a great deal of it. Reading tests carried out by Underwood et al. (2004) and Conklin and Schmitt (2008) show FSs were read more easily than nonformulaic language by NNSs. Ellis et al. (2008) investigated the accuracy and fluency of processing by NSs and NNSs of academic FSs. The results show that 'native speakers and advanced ESL learners have become sensitive from their usage histories to these expressions so that they process them preferentially' (2008:389); NSs were more sensitive to the 'mutual information' of collocations, the strength of association between string components, NNSs on the other hand were more sensitive to frequency. Ellis (2012) surveys recent studies investigating learners' sensitivity to FSs in comprehension and production. He describes one experiment (Hilpert 2008) where formulaicity has been demonstrated to prime phonetic processing. This experiment used a signal that ranged on an eight-step continuum from /trai/ to /krai/ and a carrier phrase, *they made me.* On hearing the signal, participants had to say whether they heard *cry* or *try. Make me cry* is more formulaic than *make me try*. When presented with the carrier phrase, more instances of ambiguous sounds were identified by participants as *cry.*

Again, there is not a great deal of research on instruction in FSs, and less again on instruction in formulaic sequence use in speech. Boers et al. (2006) conducted a study investigating correlation between perceived oral fluency and FS use, and the effect of explicit instruction on FS use. Results were positive for both. Correlations with regard to fluency and range of expression were found to be significant but the ranking for accuracy was not found to be statistically significant. The authors concluded 'the use of formulaic sequences…can help language learners come across as proficient speakers in an interview conducted in their L2' (Boers et al. 2006:257).

Wood (2004, 2006, 2007, 2009) has for some time been interested in the contribution FSs can make to oral fluency. The four studies referred to all established correlations between improved fluency, increased use of FSs, and strategic use of FSs in discourse organisation. Of particular interest to the present study, he has attempted to investigate the effect of prompting automatization of FSs and has given careful attention to use of activities for that specific purpose. These are described further in Chapter 4. Wood (2009) carried out a case study on the effect of an intensive fluency workshop, focused on FSs, on the student's monologic speech. Using quantitative measures, the results were positive for gains in oral

fluency and for increased FS use. In addition, FSs used post-test were longer and more complex (2009). Wood did not use a control group and admits it is not possible to estimate the impact of the fluency workshop but suggests that because the workshop involved:

> a high degree of repetition and practice of formulaic sequences relevant to particular types of narrative expression…it is possible that this led to increased facility with the sequences as they became less of a load on working memory and cognitive processing, and because an easily accessed part of the learner's repertoire (Wood 2009:54).

Towell et al. (1996) used both temporal and qualitative analysis to compare learners' speech before and after a study abroad programme. Qualitative analysis involved an examination of lexical phrases, as defined by Nattinger and DeCarrico (1992), fillers, modifiers and organisers. They were also interested in the use of certain L2 structures seen as important in natural L2 discourse. As a result of this analysis on learners' recordings, they claimed fluency gains clearly reflected proceduralization of linguistic knowledge, particularly with regard to the use the use of sentences builders preferred by NSs.

Raupach (1984) studied formulae as indicators of planning units; and was interested in the use of fillers, modifiers and quantifiers, assuming that the complexity of planning involved in L2 speaking would result in more hesitation phenomenona present than in L1. His interest in the psycholinguistic nature of formulae is clear when he cites work on automatic speech as of great relevance to his study. He cites Van Lancker in the following account:

> Automatic speech consists of different automatic subsets… characterized by properties such as cohesiveness, redundancy, familiarity, frequency and affective strength…it has been claimed that the formula units constituting automatic speech can be interpreted in terms of psycholinguistic units that are processed differently from propositional speech (Raupach 1984:116).

Comparing speech samples of learners before and after a study abroad period, he finds evidence of changes in the learners' planning behaviour:

> Part of the planning activities that previously had been reserved for silent and filled pauses is now processed in connection with the acquisition of new organizers leading to a preferred set of formulaic schemata…and collocations…some of the "islands" can more and more become integral parts of longer speech stretches' (Raupach 1984:135).

Formulaicity for these learners was developed in tandem with greater discourse competence, reflected in part by embedding of organisers within speech runs. Following a programme of instruction, Taguchi (2007) also found evidence for greater discourse competence being contributed to by use of memorised grammatical chunks, 'a semi-fixed grammatical pattern that carries a specific function' (2007:437). He describes some of the ways in which learners' discourse had improved: creative use of chunks, asking more follow-up questions, integrating interlocutor's information into discourse. He comments more generally then on

the use of chunks within and across the discourse:

> Learners reproduced individual chunks accurately, used them for appropriate functions, and reassembled them together to manage discourse. As shown in this study, chunks at the individual level may appear small and simple, but they can collectively contribute to discourse level production (Taguchi 2007:451).

Some chunks may very well be neglected in the classroom because they appear *small and simple*. This, of course, is to focus only on structural form, and not to attend to 'rules of use'. The *small and simple,* the *little words,* can nevertheless pose challenges for the learner in terms of appropriate and effective use.

There is evidence of FSs being used effectively as a communication strategy by learners. Dörnyei and Kormos (1998) examined how speakers managed problems and overcame difficulties in L2 communication and noted the use of 'lexicalized pauses', where fillers, *well, you know* or 'more complex prefabricated chunks' *how can I say that, this is rather difficult to explain* (1998:370) were used. Wood (2006) also notes an increased use in formulaic self-talk and fillers by participants. Myles et al. claim, 'the use of formulas did indeed facilitate entry into communication and speed up production in the early stages' (1998:358). Children in a partial immersion situation gave evidence of 'using formulaic sequences as props to contribute new information' (Girard & Sionis 2004:46).

Individual differences may impact on acquisition and use of formulaic language. Raupach (1984) made observations on proficiency impact on range and use of formulaic sequences,

> …at a lower level of proficiency learners display a great variety of idiosyncratic forms of planning behaviour, especially in their use of lexicalized fillers and of modifiers. At a more advanced level, they may have arrived at a near-native segmentation of their speech stretches, and this is partly due to a more idiomatic use of hesitations phenomena as far as form and distribution are concerned (1984:134).

Differences in the 'repertoire of organizing formulae' thus marked a clear distinction between proficiency levels. Wood (2004) indicates L1 effected use while Fitzpatrick and Wray (2006) indicate motivation and proficiency level may at times be relevant but they found evidence to be mixed. They remark:

> …individual differences throw up many agendas that can conflict with the desire to sound native-like…[they conclude that] …idiomaticity is not like a coat of paint that can be applied to all learners uniformly for a uniform effect…[but] is intrinsically tied [to] the learner's personal identity and motivations in learning and using the language' (2006:55).

These comments on identity and motivation prompt revisiting the situation of Irish and of the typical Irish student, presented in detail in Chapter 1. For many, Irish is a compulsory school

subject and a low pass will suffice to matriculate; the majority do not have interest in further studies in the language. Most students do not have an opportunity or need to use Irish outside of school. So for many students there are no instrumental goals and no communicative pressures, they will not need to ask about bus times or to make small talk in Irish. What is the relevance of 'native-like selection' and 'native-like fluency' to these students?

'Native-like' is not presented as a goal to be measured against. It is a way of presenting the language and draws attention to language processing. Instead of presenting the language as a closed and fixed set of abstract rules and vocabulary lists, 'native-like' demands attention is given to *how* the language is used. What are the general characteristics of Irish speech? What patterns can be detected? What do NSs do in other languages that help them speak fluently? Is the 'native-like' thing to do actually close to a 'natural' way to do something, with evidence for similar characteristics to be found in other languages? Presenting students with rules or lists of discrete items signals to the students these are items to be mastered. Presenting students with carefully selected audio recordings invites a linguistic engagement of a different order; one I would argue is inherently more interesting, more motivating and potentially of important benefit in developing communicative competence.

3.8 Teaching formulaic sequences

3.8.1 Teaching speaking

'An environment-driven problem solver often produces behaviour that is complex only because a complex environment drives it' (Ellis 2001:37).

In educational systems that have fostered and privileged the written word, the spoken word has traditionally played second fiddle. Like good children, students spoke 'when spoken to', teachers did the talking. Practice has changed considerably. Within the language classroom, the emphasis on communication brought skill in speaking to the fore. At the beginning of this chapter it was noted how various disciplines have contributed to a greater recognition and understanding of language systematicity; these findings along with access to corpora of spoken language have made a great contribution to further research, applied studies, empirical investigation of methodologies, monitoring of acquisition routes and more. Pick up any standard EFL textbook and one sees an index which typically makes reference to four communicative skills, gives specific treatment to each but integrates these skills across topics.

However, formulaic language occupies an unsure and uneasy place on the syllabus and in the classroom. Indeed, for a variety of reasons, the teaching and testing of speaking has tended

not to be as systematic as the teaching and testing of writing. At the level of vocabulary learning, for example, textbooks typically feature lists of topic related vocabulary and give less attention to vocabulary characteristic of speaking and interaction. Luoma (2004) notes spoken language often uses a) more generic words *I got that thing you were looking for,* b) vague words *thing, sort of,* c) fillers, hesitation markers *you know, right* and d) fixed phrases*, not too bad, and yourself?* Vocabulary of this nature is highly context-bound, as well as interactional, and obviously demands appropriate activities for acquisition which give due cognisance to these aspects.

This discussion of formulaic language teaching examines the challenges this focus presents, and highlights practices seen to be of relevance. Among the many factors that coalesce to making a language learning environment 'complex' are the exposure to rich input, the nature of communicative need, and methodologies that are congruent with the specific linguistic focus, i.e. formulaic sequences. These will now be considered in turn.

3.8.2 Classroom context

There are aspects to classroom practice that lie outside of an individual teacher's control. These are well recognized, and some were detailed in Chapter 1. It is beyond the scope of this research to explore specifically how preparation for exams might be enhanced by instruction in FSs or how teachers might incorporate formulaic sequence instruction into the syllabus. However, it is argued that the classroom context frequently poses distinct challenges to the instruction and acquisition of FSs (Schmitt & Carter 2004, Weinert 1995, Wray 2002). Given that most people learning Irish do so in a classroom environment, and that this present research comprises use of an instructional approach, the obstacles that may impede successful acquisition of FSs need to be considered

Classrooms reflect the nature of the society they are part of but a classroom is not a true microcosm of society. In many subjects classroom communication is both transactional and instrumental. A language classroom endeavours to make communication an end in itself, but teachers can struggle in an effort to make a communication activity both meaningful and linguistically productive. Complex tasks can be difficult to execute meaningfully in a short time. Many simpler communication tasks can be accomplished with the exchange of basic information. More open tasks demanding discussion, of the '*who would you throw off the boat'* type, can lack in communicative pressure. Wray contends that there is an absence of a genuine communicative need in the classroom, the kind of need that drives formulaic language use. Indeed, the dynamics of peer pressures can work in the opposite direction: 'the desire to signal group membership may even encourage the use of non-native sequences or

the avoidance of native-like ones, since the strongest group pressures are not from the community of L2 speakers but from peers in the class' (Wray 2002:205).

While it has already been stated that the ability to speak effectively in interaction is not a research objective within the present study, in the context of Wray's concerns it is opportune to note that a very different perspective on the classroom context and development of competence in speaking has been proposed for some time (Kramsch 1986, Wells et al. 1981). Classroom Interactional Competence (CIC) is defined by Walsh as 'teachers' and learners' ability to use interaction as a tool for mediating and assisting learning' (Walsh 2011:158). CIC places interaction at the centre of learning and teaching in the classroom. Interactional competence is affirmed as an essential language skill and CIC strives to create 'space' in the classroom for interaction (Walsh 2012). Barraja-Rohan illustrates how interactional competence can be fostered in the language learning classroom using conversation analysis (Barraja-Rohan 2011). Specifying the components of interactional competence for attention *in* the classroom *through* interactional tasks and assessing performance has the potential to significantly change the nature of the classroom context for learners and teachers, a matter returned to in Chapter 7.

One cannot pretend the classroom is not what it is but it is possible to cultivate within it a learning environment that puts a dynamic engagement with the subject at the core. It is argued here that where learning is not shackled to the textbook but 'the speaker' is brought into the classroom as textbook, and methodologies employed that foster 'native-like fluency' and 'native-like selection'; that this learning is intrinsically more motivational for students. There is debate on the appropriateness of the 'native-like model' for learners. We have already commented on this in Section 3.7.4 and in Chapter 7 some brief remarks are made on the need to engage in attitudinal research with students on this matter. Wray's comments on the pressures from peers are granted, however, and for course designers and teachers activities and methodologies need to ensure that interlocutors have task demands that pertain *specifically* to formulaic language use, requirements that should heighten awareness of features and ensure a degree of co-operation between students.

3.8.3 Input and materials
A basic requirement for SLA is input, in the language classroom input is primarily provided by textbooks and teacher talk. In Chapter 1 the limited exposure students typically have to authentic speech in the Irish language classroom was described. In language classrooms generally there may be a lack of rich input. A tendency towards alignment in language use between a teacher and students can result in impoverished input from teachers. While

explanations and directions may be presented with clarity, teacher-talk may be non-idiomatic and lacking in native-like prosody. Classroom interactions can be highly routinized, contributing to exchanges that are linguistically restricted and predictable. There may be few opportunities given for the turn-taking that typifies the construction of naturally-occurring conversation. There may be few opportunities even for students to talk; teacher talk on average takes up 70% of class time (Meunier 2012).

Unfortunately, it appears there is as yet no comprehensive, coherent programme on formulaic language instruction developed for language teachers. While the primary concern of this research is with spoken formulaic sequences, it is worth noticing that even in written input, i.e. the classroom textbook, FSs may not always be treated effectively. Wood (2010) investigated formulaic language, specifically lexical clusters, in commonly used English for academic purposes textbooks and found:

- Lexical clusters identified in the texts did not occur with high frequency.
- There were no activities, either implicit or explicit, dealing with lexical clusters.
- The highest frequency clusters were to be found, not in the *texts* but in the accompanying *instructions*.

On the latter point, one suspects many students would concur. Across the living generations there are few students of Irish who cannot fluently utter *líon na bearnaí, '*fill the gaps'. The researcher has known whole classes to chant with gusto and perfect intonation the spoken instructions, *as Gaeilge,* accompanying audio comprehension exercises.

Commenting on the trend away from memorisation and repetition practice in western countries, Wray notes that:

> [S]ome materials writers concerned about how learners can be supported in achieving idiomaticity have found it useful to consider phrases and common collocations as a kind of complicated word, so that they can be incorporated within vocabulary learning…This seems to reflect the acceptance that memorising vocabulary is an acceptable aspect of language learning in the west, while, for many teachers and learners, internalising longer strings is not (Wray 2009:5).

A 'complicated word', unfortunately, may not always be accessible to learners when presented decontextualized and in list form, and may require embedding in longer strings. Meunier (2012) notes from surveys that there are frequently discrepancies between corpus-based language descriptions and descriptions in textbooks:

- Some textbooks include very infrequently used phrases
- The typical treatment of conditionals (first, second and third) covers just 15% of a sample of conditional use from a NS spoken language corpus.
- Syntactic discrepancies between spoken language in textbooks and real spoken data.
- Little attention given to hedging devices (see comment in section 3.6.3).

The situation is particularly challenging for Irish, given that spoken corpora, while developing, are still very small and have certainly not come to the attention of textbook designers. However, relevant authentic audio input is quite accessible. Given that Irish is a minority language and that NSs are bilingual, the 'native-like' paradigm is not as restricted a set as it might be in the case of dominant languages. There is a significant cohort of bilingual speakers or speakers with very high competence levels in the language who can serve as paradigms: including young people who attended all-Irish primary and secondary schools, people who grew up in bilingual households. Again, it can be enlightening and motivational for students to hear speakers speaking Irish in a variety of accents; south-side Dublin, midland, Polish; and on a variety of real-life topics, as opposed to working with a scripted standard delivery. There is, of course, a great need for supporting materials, accompanying recordings, to be developed for use in the classroom.

For the purpose of this research, three very different types of audio material were used. These are described and compared in Section 4.9. From working with just those three resources, it is very clear a range of competence levels could be quite easily addressed with readily available materials. Preparing the audio for classroom use and developing supporting materials did take time, mainly due to it being the first time this was done by the researcher with consideration being given to FSs. Again, this work would be considerably better informed by access to a corpus of spoken Irish.

Apart from having a general concern with prompting receptive awareness and productive use of chunking, the course designed for this research gives specific attention to formulaic language use and three groups were focused on: narrative devices, sentence builders and FSs present in shadowed audio. Selection of items is described in Section 4.8. The groups were given varying degrees of attention and types of treatment, also described in that section.

3.8.4 Methodologies: 'X marks the spot'

'[I]t is often quite difficult to find a spot in a conversation for a routine or pattern learned in a dialogue' (Krashen 1978:297). It is one thing to identify, describe and categorize FSs. Classifications, formal and functional, of FSs abound, and may be easily supplied and validated by corpora research. It is another thing altogether to develop approaches to the teaching of FSs: '[A] better description of *what* to teach is not a sufficient basis for teaching methodology' (Weinert 1995:181, emphasis in original). Formulaic language production is underpinned by a particular type of psycholinguistic representation, and formulaic language acquisition is not a simple matter of learning phrases. It demands an approach that will prompt appropriate cognitive processing and an approach that recognises the distinct

qualities of the lexical unit that is the FS. The cognitive processing focused on in this study is that of proceduralization.

Empirical research on instruction for FS acquisition will be discussed in Chapter 4; in brief, the research give emphasis to input enhancement and a strong focus on practice and production, with frequent use made of repetition in both practice and production. A focus on form does not feature strongly in these particular approaches. This may partly be because of the unified nature of FSs, 'words do not go together, having first been apart, but rather belong together (Wray, 2002:212), and partly because of the contextualised nature of FSs. Activities detailed below are from studies presented in more detail in Chapter 4, as well as other research.

Noticing

A range of noticing activities may be employed to foster students' awareness of formulaic language use. Meunier (2012) found the following in textbooks: training students to notice useful chunks, typographical enhancement, providing metalinguistic comments, guidelines on recording collocations, classifying speech act phrases and similar. Bishop found evidence that FSs were often not salient for learners. He suggests:

> [U]sing Levelt (1989)'s concept of the lexeme and the lemma, it is plausible to argue that the root of the problem lies in the inability of learners to match multi word lexemes with a single lemma (meaning). The lack of awareness that a single meaning needs to be associated with a group of words precludes the association of lexeme (form) and lemma (meaning) which is a necessary condition for lexical learning (Bishop 2004:5).

Bishop (2004) found that students were more likely to look for glosses to FSs when these items were highlighted. The students could easily recognize if there was a *word* they didn't understand but were not always aware they did not know a phrase used, an effect of literacy focused on word acquisition, perhaps. Boers et al. (2006) also used noticing activities where students' attention was drawn to FSs. Wood's fluency workshop (2009) commenced with a noticing activity, learners listened to a recording of NSs and discussed the stories heard. They then listened again but were provided with a transcript and asked to note hesitations heard.

Analysis

Analysis is seen to an appropriate way both of fostering awareness, perhaps even changing perceptions about the nature of speaking for some, and also to develop a more accurate understanding of L2 collocations, meaning and form. After marking hesitations in their transcripts, Wood (2009) then asked students to examine the speech segments in between.

Ellis et al. (2008) give evidence that even highly proficient students were more sensitive to frequency than to the distinctive meaning attached to a formulaic sequence and argued the learners' system need also to be 'tuned' 'for coherence for co-currence greater than chance' (Ellis et al. 2008:391-2). Nesselhauf (2003) concludes her study of L1 impact on collocation acquisition with a number of suggestions for instruction, all employing analysis: teaching the *entire* collocations, e.g. *pass judgement on* as opposed to *pass judgement*, teaching with specific reference to L1, and giving the verb attention in verb-noun collocations. Liu (2010) argues convincingly that many collocations are not idiosyncratic but are semantically motivated and illustrates with everyday verbs of high frequency that are problematic for learners, e.g. *make, do, have*. Examining frequently used noun collocations with these verbs, students would readily ascertain that *make* is very often used to indicate initiation, effort, *make progress, make a friend* whereas *do* is more often used with routine actions and things one is asked to do, *do your best.* He claims engaging students in corpus activities would greatly enhance students' acquisition of their use, but stresses such analysis should be to supplement noticing and memorisation activities, and not to replace them. Acquisition is thus through complementary treatment of collocations as fixed units *and* analysis highlighting the semantic grounding of collocations. Meunier (2012) also strongly advocates the use of corpus activities with students.

Where instruction might encourage learners to engage in analysis of FSs, Wray argued this amounts to 'pursuing native-like linguistic usage by promoting entirely *un*native-like processing behaviour' (2000:463, emphasis in original). O'Keeffe et al. (2007) do not see this as a problem:

> [C]lassrooms *are* places where conscious analysis of social phenomena of all kinds can occur, unlike the world outside the class; there the same phenomena are primarily experienced first-hand (2007:79, emphasis in original).

Memorisation, Repetition, Practice

A variety of *memorisation, repetition* and *practice* activities have been used in FS instruction. Henry (1996) designed a course for people working in banks, which involved drilling chunks for specific banking transactions, using symbols representing steps in the transaction which would function as advance organisers for the students, and giving a lot of practice work to students, gradually removing props. A similar approach was taken by Fitzpatrick and Wray (2006) who involved students working independently with NSs in preparing, rehearsing and memorising material in preparation for targeted encounters. No clear pattern emerged from this study with regard to impact of proficiency but there were interesting correlations with aural-repetition aptitude and possible correlations indicated with motivation and attitude. Some students in their study were very enthusiastic about the

approach, and found having a stock of memorised utterances to be a beneficial resource for them in negotiating communicative encounters. Taguchi (2007), in a study discussed in Section 3.7.4, made intensive use of memorised dialogues which were taken from audio resources and incorporated targeted chunks. Wood (2009) used a mingle jigsaw, dictogloss and 4/3/2 procedures, each of these activities employed oral repetition, practice and memorisation. Memorisation, repetition and practice activities are used extensively in the present research design. In Chapter 4 concerns about the use of such activities will be addressed through a brief presentation of repetition activities located within communicative models. Chapter 4 also contains a more detailed presentation of the central memorisation, repetition and practice activities employed in the course designed for this study.

Bardovi-Harlig has drawn attention to *pausing and prosody*, 'another area to consider in evaluating the production of conventional expressions by learners is pronunciation, prosody, and tempo, including rate of speech and hesitations' (2009:784). Shadowing and dictogloss demand strong attention to aspects of prosody, as already noted these were employed in Wood's fluency workshop and are described more fully in Chapter 4.

If attention is given to fostering formulaic language use in the classroom, it also needs to be given to providing feedback to students (Meunier 2012) and to assessment of their use. However, very little appears to have been written on this specific matter. The argument made Johnson and Jackson (2006) with regard to effective performance-related feedback in the context of general skill development were noted with interest in Section 2.5.2

3.9 Conclusion

In Chapter 2 a description of speech fluency was presented: we reviewed a model of speech production and detailed the various measures of fluent speech. A psychological basis for understanding the development of fluent performance more generally, proceduralization, was closely examined as this provides a cognitive basis for the development of the present research design. Chapter 3 gives attention to a central feature of fluent speech, formulaic language and has argued that use of formulaic language has many benefits for speakers, including ease of processing. The difficulties experienced by learners in developing competence in formulaic language use suggest there is a role for specific instruction in this area, and the noted link between formulaic language use and processing benefits indicates activities prompting proceduralization and automatization are particularly relevant.

Chapter 4 Design of Fluency Course

4.1 Introduction

This chapter details the progression towards a programme of instruction in FSs for oral fluency. Firstly, some brief comments are made on classroom research, acknowledging the challenges posed by it but also making a case for it. Some focus is then given to the use of repetition and memorisation techniques in the classroom. Repetition is not without its critics, and attention is given to a programme that responds to some of these criticisms by locating repetition within a strong communicative activity. Four studies that look more generally at the techniques of memorization and repetition are also described. Seven empirical studies that explore FS acquisition are then presented and examined for ways in which they helped inform the course design. A set of criteria is detailed which is used to extrapolate from the studies presented findings and features of most interest to our proposed research.

The course outline for Courses 1 and 2 is presented respectively, indicating the activities and fluency focus for each class. The remaining sections look at specific aspects to the designed course. Examples from the course are used to illustrate the pedagogical realisation of core principles, along with the manner of implementation. While underpinned by the skill acquisition principles discussed in Chapter 2 and a lexical focus derived from research presented in Chapter 3, programme design naturally also gave consideration to the course participants. Materials and activities were developed with their age, interests and average competence level in mind. The use of two techniques which are of central importance, shadowing and 4/3/2, is explored and the selection of targeted FSs and of audio input is discussed. The chapter concludes with an illustration of how activities within the programme are developed and sequenced to facilitate a proceduralization effect, a core aim of the programme.

4.2 Classroom research

The language classroom itself has frequently been the object of research, with a focus on aspects such as classroom discourse and student-teacher interaction. In such cases, the researcher's task involves collection of data from regular classroom activity with minimal intrusion. Research into instruction effects is of a different order and, while such research is potentially of significant value, it does pose considerable challenges. Perhaps one of the most obvious challenges posed by classroom research into instruction effect is the number of potential variables to be considered and the lower level of control the researcher may have over many of these variables. When delivering the pilot study the researcher found herself

interrupted midsentence by school announcements on the intercom. It transpired announcements were made during that class period every day – but not at a set time. And more, announcements could be brief and succinct one day, and involve extended notices the next.

Instruction effects research is frequently conducted outside of the conventional classroom environment, and typically involves students following a custom-designed course in a laboratory setting. The primary orientation of the present research is pedagogical and classroom-based; speaking is for the most part a real-life interaction and the classroom is the site of learning for most students of Irish. The proposed research incorporates both interactive classroom activity and independent work at a computer console, the rationale for this approach is presented in Section 4.6.

Neither setting was free from interruption or unforeseen problems. Classroom research can present a wide range of variables in areas such as participant profile, classroom dynamics and style of instructor. Some of these variables can be challenging, if not impossible, to control. This might be seen to compromise the research with regard to the empirical validity of findings. On the other hand, the legitimacy of classroom research may be premised on grounds of ecological validity. While many of the activities were innovative, or at least new to students, the courses were conducted in environments which were familiar to them, as opposed to a language laboratory environment. In addition, interaction is a key component of the courses. Both courses involved interaction, and Course 1 offered various opportunities for impromptu discussions. The researcher was conscious of a possible trade-off between ecological validity and experimental control, and research design to some extent involved a balancing act.

DeKeyser (2010) argues for the importance of classroom research on grounds of ecological validity and also because of the opportunities it presents for longitudinal studies. A basic requirement, however, is:

> …that more psycholinguistically oriented researchers learn to understand the value of a study that is not 100% controlled, but that deals directly with the processes that matter most to most second language learners and teachers in the most controlled way that is practically feasible (DeKeyser 2010:162).

Interestingly, the 'trade-off' perspective is challenged. Complexity Theory (Larsen-Freeman 2011) and 'learning sciences' (Williams 2013) acknowledge that 'classrooms and language learning are complex systems whose properties emerge from the interaction of multiple variables, not all of which can be predicted, still less controlled (Williams 2013:550).

Williams describes a deliberate effort made 'to break down the division between research and pedagogy, between researchers and teachers, and between experimental rigour and ecological validity' (2013:550).

Every effort was made to maintain the integrity of the programme of instruction as a research study, and that work started with careful research design. This process was informed greatly by relevant empirical studies.

4.3 Repetition in the classroom: communicative approaches

In Chapter 3 it is argued one of the main benefits of FS use for NSs is in the automatic manner of production and, accordingly, that instruction in FSs should prompt and foster a process of proceduralization. It was noted in the general discussion in Chapter 2 on automaticity that memorisation activities and repeated practice are seen to be of central importance in the process of proceduralization. Some of the empirical studies to be presented in Section 4.5 make intensive use of memorisation and repetition. There is no doubt, however, that memorisation work and repetition activities can pose challenges for the communicative classroom: 'focused practice continues to be seen as inimical to the inherently open and unpredictable nature of communicative activities' (Gatbonton & Segalowitz 2005:327). Wray and Fitzpatrick concur, '[P]lanned memorisation in language learning is neither normal nor fashionable' and suggest this position has its basis in 'long-rehearsed criticisms of audio-lingual-type approaches… and justifiable scepticism about the value of any kind of 'parrot-learning' (2009:141). However, Davy suggests the bias against repetition may be turning, and notes activities being developed by SLA researchers and practitioners which provide repeated rehearsal but within realistic communicative contexts. She urges some caution, 'this type of practice has less control over vocabulary items and grammatical structures that can be rehearsed, as students in these contexts will often use more familiar structures to compensate for the need for greater fluency or accuracy during these tasks' (Davy 2012:2). In other words, more open practice may consolidate and lead to automatization of already familiar items over the less familiar equivalent structures. On the other hand, DeKeyser (2010) argues for a broad concept of systemic practice from the perspective of skill acquisition theory, such practice facilitates proceduralization of declarative knowledge, manifest in enhanced skills of use. In addition, it can help to proceduralize items of low saliency for learners. DeKeyser emphasises there are many different types of practice, and that in selecting or adapting practice activities consideration should be given to learner profile.

Prior to presenting studies that helped to inform the course designed for the present research, it is important to give attention to proposals made by some leading advocates of repetition and systemic practice which address criticisms of 'drill and kill' repetition.

Constructive repetition

Repetition is a basic feature of speech, a reflection of recurring situations and pragmatic functions served by language according to Bygate (2006). Repetition also supports language learning. Bygate makes an important distinction between verbatim repetition and repetition with improvisation, a feature of speech where improvisation builds on common structures and phrase. He employs the term, 'constructive repetition' to describe repetition that is not verbatim but 'enables constructive adjustments and adaptations according to speakers' local needs' (2006:166). Within the context of Levelt's model on speech production, Bygate argues strongly for the need for repetition activities for learners:

> If speakers and listeners have to work simultaneously with new meanings, new formulations and at managing a new articulatory/acoustic system, it makes sense to conclude that some recurrence and predictability at the conceptual level is likely to free up capacity to attend to the articulatory and formulation levels' (2006:168).

Bygate presents a range of tasks which generate repetition in the process of task preparation and completion, his description of 'three-phase jigsaw tasks' (originally developed by Geddes & Sturtridge 1979) illustrates the concept of constructive repetition well.

1. Four complementary reading/listening tasks are given to groups, to be done in parallel.
2. Students are regrouped, with one student from each of the original groups, to pool information from the first phase.
3. Groups have to present their solution to the whole class.

Bygate also talks about repetition in whole-class talk, such as in classroom management or regular class routines like daily weather reports with junior classes[31], or pre- and post-task talk. A teacher might do an example task with the class, thus 'the class would be able to rehearse roughly the procedures they might follow, and the kind of utterances that they could use, to do the task effectively' (Bygate 2006: 178).

ACCESS

Gatbonton and Segalowitz assert failure to foster fluency in learners is precisely because 'there are not provisions in current CLT methodologies to promote language use to a high degree of mastery through repetitive practice' (2005:237). They propose a fluency

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[31] A daily routine now employed by the researcher with junior classes is to 'speak and complete' from prompts on the board, 'today is X, the date is X, it's (a cool/ordinary/X) day'. Mundane, but each utterance introduces students to structures requiring alternative forms of the verb 'is' in Irish.

programme *ACCESS,* [32] 'designed to promote automatization without jeopardizing [the classroom's] communicative nature' (2005:328). *ACCESS* may be seen to address concerns raised by Davy noted above, about students' use of familiar structures over targeted structures. The aim is for learners to achieve competency in a targeted set of utterances within a CLT context. A pre-task activity is used to elicit or, if necessary, provide the basic linguistic resources – lexical, phrase structures, pronunciation – required for a communicative task. This task involves various stages. In a sample activity, 'Family', learners firstly work in groups to create a pretend family, they then interview other groups to learn about their 'families' and finally they present findings to the class, giving opportunities for corrective feedback by the other groups. Three criteria are stipulated for task design.

To be genuinely communicative.

This entails both an information gap (filled initially by creative contributions from group members), and tasks demanding communication (interview and presentation). Apart from prompting learner interest and motivation, there is a cognitive benefit. Through the interaction episodic memory is activated in learners' representations of utterance structures, the authors argue the embedding of utterances in episodic memory means 'retrieval routes' are established for later access to utterance structures in 'transfer-appropriate processing conditions' (2005:332).

To be inherently repetitive

In the task activity there is repetition *within* each stage and *across* stages. This repetition is deliberately prescribed, 'high consistency of situation-utterance correspondences across the repeated events…will lead to automaticity in both reception and production' (2005:333). Repeated activation of retrieval routes facilitates automatization of repeated structures.

To be functionally formulaic

Formulaicity is understood primarily in terms of pragmatic function and re-use potential. As activity design prompts the repetition of short phrases or 'multi-word constructions, produced almost verbatim each time they are used' (2005:333), formulaicity also encompasses *fixedness* of structure. Full utterances, as opposed to one or two word answers, are expected from students, pushing learners 'beyond mapping words onto intentions… to formulate the structure needed for delivering the words in utterances' (2005:338**)**.

ACCESS provides opportunities for creative use of target utterances in an open dialogue of

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[32] Automatization in Communicative Contexts of Essential Speech Segments

task theme at the end of classes, but does not specify methodologies for prompting this. Open discussion can be problematic for some learners and may need to be semi-structured to facilitate productive interaction. More generally, the use of the word 'creative' in the term 'creative automatization' might have been driven by a desire to reassure purists in the communicative tradition, but suggesting as it does the uniting of dichotomous processes may be unfortunate. In a response to an earlier article introducing ACCESS (Gatbonton & Segalowitz 1988), Bamford critiques the authors for expressing a restricted understanding of creativity in *ACCESS* and claims, 'I think there is something very creative going on when any language – be it a word, a routine, or the control of a function… becomes automatic. Automaticity means that learners are doing nothing less than automatically and instantaneously generating an aspect of their experience in the second language, just as they are able to do in their first language (Bamford 1989:364). Creativity in these terms is the ability to use resources effectively to describe experience, the creation of meaning, a span from the banal and prosaic to the erudite and eloquent.

4.4 Empirical research on memorisation and repetition techniques

In Chapter 2 theoretical research was examined on the central role played by memorisation and repetition with regard to chunk formation, proceduralization and automaticity. Empirical studies exploring the effect of these techniques on the language learner will now be presented. Four in total are presented, all are laboratory studies. Proceduralization is referred to by all of these studies, in studies 2 and 3 proceduralization provides a theoretical *basis* for the studies, in studies 1 and 4 memorisation and repetition activities are used in order to investigate evidence for a proceduralization effect.

Study 1: 'The acquisition of a linguistic skill by adults: Procedural and declarative memory interact in the learning of an artificial morphological rule' (Ferman et al. 2008).

The findings of this study were already examined in some detail in Chapter 2. Attention is drawn here to the inherently repetitive nature of the learning processes across the training sessions. Although this study was primarily interested in the role of procedural and declarative memory in learning, it is worth emphasising some of the findings given in Chapter 2. The authors conclude the results are positive for proceduralization effect with repetition. Interestingly, they also find that participants were able to accurately and fluently generalise use of the artificial morphological rule (AMR) without any explicit instruction on this rule. Findings for proceduralization effects were even stronger for the phonological aspect of the AMR, and the authors' comments are of interest:

> Our findings are consistent with the notion that morphological 'rules' include distinct phonological and semantic representations… Furthermore, the finding that all but one participant not only acquired the phonological transformation rapidly but also did so prior to discovering the semantic aspect is compatible with the ease whereby phonological aspects of language are grasped and generalized in first and second language learning (Ferman et al. 2008:4013).

Granted these comments refer to the phonological representation of morphemes, but their potential relevance to the phonological representation of FSs is clear. Within Wray's model, these morphemes are likely to be considered FSs.

Study 2: 'The Effect of Oral Repetition on L2 Speech Fluency: An Experimental Tool and Language Tutor' (Yoshimura & MacWhinney 2007).

This brief paper succinctly presents the argument for oral repetition:

> Studies of individual differences in language learning have shown that it is important to maintain and rehearse phonological information in working memory. The linking of phonological short-term memory with long-term memory in language learning is crucial to triggering the chunking of lexical and syntactic units to promote fluency (2007: 25).

Participants in this study listened three times to sentences which appeared on a computer screen, they then read each sentence six times, finally the sentence disappeared and participants were asked to repeat the sentence. Data was analysed by production time. Findings of reduced production time clearly indicate the benefit of oral repetition over repetition of aural input alone, that oral practice significantly improves fluency and accuracy, both in the read-aloud and the sentence production tasks, and that the introduction of novel words, and greater numbers of these, impacted negatively on speed-up. It is suggested that 'more practice is required to enhance automaticity of novel information' (2007: 27). These findings appear to support the employment of techniques central to the research course, shadowing and the 4/3/2 procedure.

Study3: 'The Development of Speaking Fluency Through an Oral Repetition Task (Davy & MacWhinney 2009-2011)

This study complements Study 2 and considers the question of fluency gains and effect on accuracy. Study 3 actually comprises of five studies, with variables such as language proficiency and tasks investigated. Full reports on these studies are not yet available. One project compares both fluency and accuracy effects with repetition practice in phrases and in full sentences. Testing involved participants orally producing targeted utterances. The findings are interesting to note, they indicate:

> [A] trade-off between fluency and accuracy, with the phrase condition generally leading to more accurate but less fluent production than the sentence condition, and an opposite pattern with the sentence condition. However… training on very long sentences for part of the training led to increase in fluency, on top of the increase in accuracy from training in phrases. This suggests that both types of practice are necessary for improving speech production (Davy & MacWhinney 2009-2011, par. 2).

The present study includes training in both phrases and narrative chunks and findings in relation to both are discussed in Section 6.3.5

Study 4: 'Fostering fluency in second language learning: Testing two types of instruction'
(de Jong 2012).

Study 4 is also from a suite of studies. The two types of instruction tested are shadowing and Nation's 4/3/2 repetition procedure, and some of the studies explore the incorporation of training in FSs with these activities. Both shadowing and 4/3/2 are employed in the course designed for the present research and are discussed in Section 4.6. 'Fluency training in the ESL classroom: an experimental study of fluency development and proceduralization' (de Jong & Perfetti 2011) is the only study published to date from this suite, it investigates whether the 4/3/2 repetition procedure can prompt proceduralization in learners. Findings suggest that fluency gains between pre-tests and post-test show evidence for proceduralization. Fluency measures and indicators for proceduralization are detailed in this article. As the research is specifically interested in evidence for proceduralization, these measures were carefully examined and considered to be appropriate for the present study. They will be discussed further in Section 5.2.

4.5 Empirical research on instruction for FS acquisition

A number of studies exist which research learners' acquisition, knowledge and use of collocations, frequently used phrases and so on. Considerably fewer look at the effect of instruction in formulaic language, with fewer again focusing on oral fluency. From an extensive reading of the literature, seven studies on instruction in FSs for oral fluency were identified as being of interest.

Study 1: 'Formulaic sequences and perceived oral proficiency: putting a Lexical Approach to the test' (Boers et al. 2006).

The authors were interested in assessing the effectiveness of an instructional approach, the Lexical Approach, with regard to fostering acquisition of FSs. The Lexical Approach as

employed in this study comprised intensive exposure to authentic language input combined with instruction that aimed to foster awareness and noticing of phrases in use. The study employed the use of a control group and test results show the experimental group made greater use of a range of FSs, and that was positive correlation with greater FS use and higher fluency rating. The difference in FS use was strongest for the test component relating to a discussion of a text read by students just prior to the test conversation, with many students from the experimental group employing phrases from that text. Boers et al. surmise:

> …these observations suggest that the experimental students' awareness of formulaic sequences was raised sufficiently for them to recognize usable chunks in a new text and to subsequently "recycle" these in a conversation. In other words, these students turned their awareness into a strategic advantage (2006:256).

However, in the open conversation phase of the test the difference in FS counts between the experimental and control groups was not statistically significant. Noting students' difficulties in incorporating FSs in open conversation, Boers et al. (2006:258) suggest that 'it might be worth-while to move beyond mere "phrase noticing" into more active "phrase learning"', using activities to ensure FSs will be added to students' 'linguistic repertoire for active use' (2006: 257).

Study 2: 'The effect of formulaic sequences training on fluency development in an ESL classroom', (de Jong et al. 2009**)**

This study is completed but not yet published. Findings are summarised in de Jong and Perfetti (2011), and results were presented at the AAAL conference, 2009, with presentation slides available online. The study is one of a suite and a published paper from this suite is described in Section 4.4 Training in FSs in this study comprised of a single 50 minute session, Ten FSs (all discourse markers) were presented to participants through a series of activities drawing attention to meaning, form, function and intonation, and a brief production activity. Further sessions involved participants in a narrative retell procedure, discussed in Section 4.7. The findings for fluency from this study are mixed, with those participants who used instructed FSs showing longer runs of speech between pauses but also having longer pauses. This suggests to de Jong that '[T]he trained formulaic sequences were probably not stored as chunks, and retrieval was not automatized' (de Jong 2009). It is not clear from the conference paper or presentation slides if prosodic inspection of the trained FSs was carried out. It is noted, however, that trained participants used more uninstructed FSs than the control group, de Jong surmises 'This is likely to be due to increased awareness of the existence and usefulness of formulaic sequences' (de Jong 2009**).** The fact that untrained FSs were mostly used correctly while trained FSs were often used incorrectly would seem to

substantiate the author's contention that effort, the kind of effort that is entailed in analysis, accompanied production of the trained FSs. They postulate that more work may need to be carried out on developing effective instructional techniques for acquisition of FSs.

Study 3: 'Re-examining the role of explicit instruction and input flood on the acquisition of Spanish discourse markers' (Hernández 2011)

This study is a comparison of effects of different types of instruction: input flood (IF) alone and input flood combined with explicit instruction (EI + IF). Test results of both groups were positive but there was no evidence of significant benefit to either approach. Interestingly, however, it is noted that transcripts of classroom communicative exchanges:

> …suggest that the EI + IF group incorporated numerous and varied discourse markers into their exchanges in order to create cohesive and coherent paragraph-length discourse. In contrast, the IF group did not use discourse markers with the same degree of success as the EI + IF group… (IF) exchanges often represented a series of discrete and unconnected sentences rather than organized narratives' (2011:176).

The use of targeted FSs in organising narratives in the present study is explored, in particular through a close examination of the post-test narrative of a lower competence level student in Section 6.5.

Study 4: 'Facilitating the acquisition of formulaic sequences: an exploratory study in an EAP context' (Jones and Haywood 2004).

The focus of this study is primarily pedagogical, and confined to reading and writing skills. The authors are interested in understanding 'how learners should acquire [formulaic] sequences and what teaching materials would be useful for this purpose' (2004:269). The pedagogical approach comprised of a range of awareness activities, from initial noticing to deeper processing, for example classifying according to function and concordance analysis. Production tasks were preceded by discussion on academic FSs and support in essay planning with a focus on structure and structural coherence. Again, this study employed a control group. Results were mixed overall, with modest gains in some tests. Student interviews indicated improved awareness. The authors themselves make interesting comments on the possible impact of an unfamiliar instruction approach, which are noted below.

Study 5: 'Knowledge and acquisition of formulaic sequences: A longitudinal study' (Schmitt et al. 2004)

This study is of a different kind to the studies met so far. It incorporates noticing activities into the participants' regular course instruction but such activities are of an incidental nature, 'the teachers drew the attention of their groups to each of the formulaic sequence at some point in the course, but without giving away that they were the target of the research' (2004: 62). The programme took place in a study abroad context and the authors were not interested in examining instruction effects. The study is an exploration of FS acquisition, establishing the nature and extent of gains, if any, in semi-controlled conditions. The authors were also interested in exploring possible correlation effects between individual differences (age, gender, language aptitude and motivation) and FS acquisition. Interestingly they saw no evidence of impact. They surmise 'the relationship between the acquisition of formulaic sequences and learner attributes is not direct/linear… their impact may be modified by other factors related to the learning context' (Schmitt et al. 2004: 69).

Study 6: 'Effects of focused instruction of formulaic sequences on fluent expression in second language narratives: A case study' (Wood 2009).

Wood has written extensively on FS acquisition (2004, 2006, 2009, 2010). Amongst the studies presented here, this study involves the most comprehensive and extended programme of instruction with exclusive focus on FSs. The 'fluency programme' offered by Wood comprises a range of activities at stages described by him as input, automatization and production stages. A number of these activities were employed in our own programme and will be described in detail in Section 4.7. Procedures used by Wood for identification of FSs in learner speech samples are of relevance to the present research design, and will be presented in template form in Section 6.3.5. The increased use of FSs by the student in question is clearly established in the study but Wood draws attention also to the variety of these FSs. Qualitatively, the FSs produced by the student may be seen as of a different order: 'there is a wider range of functions and types… [these] show greater length, detail and complexity' (Wood 2009:52).

Study 7: 'Pushing learners to the extreme: the artificial use of prefabricated material in conversation' (Wray & Fitzpatrick 2009)

The term 'prefabricated material' in the title draws attention to the main focus of this interesting study. The instruction or treatment given to learners was limited to intensive rehearsal and memorisation of 10 – 12 phrases and conversational turns judged to be native-like in the context of a targeted conversation. Rehearsal and memorisation are, as indicated

already, employed extensively in the present research. Wray and Fitzpatrick (2009) take cognisance of the inflexibility of some FSs, in form and function, and explore learners' abilities to incorporate FS use into an anticipated conversational exchange. Being real-life, such an exchange is likely to present a demand for the construction of novel material which may conflict with a dependence on prefabricated phrases. The findings of this study give insight into FS use by learners and, while instruction is not a focus of their study, into the relative effectiveness of techniques employed correlated with student aptitude.

While there is a common interest in these studies, that of FS acquisition in instructional contexts, all of the studies are clearly quite distinct. They differ considerably with regard to type of instruction involved, programme delivery, duration, testing procedures and outcomes. This diversity may well reflect the young age of this field of research. Chapter 3 established a tradition of research in formulaic language, nevertheless the application of this research to the SL classroom is relatively recent. Interestingly, five of the seven studies took place in study abroad situations, which can present a challenge in controlling for effects from outside of the classroom where control groups are not used, a difficulty not faced in the context of the present study.

Remarks made by De Jong, 'Can we find better ways to teach formulaic sequences?' (2009a) underpinned much of the time and effort given to development of course activities for this research. While the present research does not test for comparison of instruction techniques, the researcher was keenly aware of the need to give close attention to instructional techniques and activities. All techniques and activities needed to support the proceduralization process. In addition, the researcher was guided by experience as a practising teacher and an awareness of the benefit in fostering students' engagement both with individual activities and with the course overall. The present research design, then, takes cognisance of various aspects of the studies described here but does not faithfully mirror any one individual study. In the next section, the progression toward course design is described.

4.6 From studies to course design

Research studies have been presented that emphasise repetition as a technique prompting proceduralization, and studies that focus on FS acquisition, most of which take place in a laboratory setting. There is a challenge in moving from these empirical studies to designing a course suitable for delivery in the classroom context. *ACCESS* was discussed because of the innovative way it incorporates a high degree of repetition in activities but does so within

a communicative classroom context. However, *ACCESS* is not an empirical study. It is now necessary to extrapolate from the various studies presented features and recommendations judged to be most appropriate to the present research interests.

It is timely, then, to recall the elements identified in Section 3.8.4 as central to a programme of instruction designed to enhance oral fluency through FS use. While instruction and activities on any such programme might aim to develop students' competence in FS use through a focus on any one of the following aspects, it is proposed that the intrinsic and distinctive nature of FSs demands that cognisance at least is given to all:

1. The phonological coherence of FSs: stress, intonation, tempo, pause boundaries.
2. The appropriate functional and contextualised use of FSs: interactional, discourse and pragmatic; preserving the semantic prosody of FSs.
3. Flexibility of FS use: incorporating FSs into free conversation, developing the ability to mix formulaic with novel, developing the ability to modify FS appropriately.
4. The automatic production of FSs: producing FSs non-analytically and using them in a fluent manner.

These aspects are used as criteria to guide the analysis of the studies selected, see Table 4.1. Other features given attention are self-explanatory, they relate to selection of FSs and testing procedures. In Table 4.1 the studies seen as most germane to each particular aspect are highlighted and brief comments on each are made from the perspective of the current research. For ease of reference, studies are referred to within the table by number:

S1 (Boers et al. 2006)
S2 (de Jong 2009a)
S3 (Hernández 2011)
S4 (Jones & Haywood 2004)
S5 (Schmitt et al. 2004)
S6 (Wood 2009)
S7 (Wray & Fitzpatrick 2009)

Table 4.1 Empirical studies and course design

Empirical Study of Interest	Relevance to Current Study
Criterion: Phonological coherence of FS	
Only 2 studies gave strong focus to this aspect. S6 employed shadowing, dictogloss and mingle jigsaw activities, all of which focus attention on phonology of FSs. In S7 NSs rehearsed targeted FSs with learners and recorded these FSs for learner practice.	The use of NSs or individual tutors was not an option. Shadowing has been practised for some time in language learning but would not be familiar to the typical Irish student. The activity is described in Section 4.7**.**
Criterion: Contextualised use of FS	
S1 emphasised use of authentic input: audio, video, textual. Used activities such as gap-fill to highlight FSs, drew attention to co-text. S3 gave extensive training in contextualised used, focus on written discourse only. Used concordance lines & corpus extracts. S6 used NS audio input for awareness work: students marked hesitations in transcript, group explored FS function in these areas.	Neither concordance resources nor, as yet, an extensive corpus of transcribed audio material is available in Irish. Pilot study included an activity where students had to mark pauses in a transcript. Study uses a variety of techniques & activities (text modification, gap-fill, discourse reconstruction) to prompt awareness of contextualised use of FSs.
Criterion: Flexibility of Use	
S4 used interactive communicative tasks prompting use of targeted FSs. In S6 learners constructed their own narratives in chat circle, 4/3/2 and free talk activities. S7 restricted students to memorised FS, comments on strategies used to cope with this (use of filers, topic avoidance, manipulation).	Interactive tasks included in course design. 4/3/2 adopted as the main activity for prompting students' use of FSs with novel discourse. 4/3/2 is described in Section 4.7
Criterion: Automatization in Instructional Phases & Activities	
All interested in prompting FS use, just 3 interested in prompting automatization. Both S2 and S6 involve an initial phase of noticing/awareness activities followed by automatization activities. S2 Automatization prompted through 4/3/2. S6 Fluency workshop included an 'Automatization Stage', range of activities used: shadowing, mingle jigsaw, dictogloss and chat circle. 'Production Stage' comprised of 4/3/2 followed by learner review. S7 Learners memorising targeted utterances through practice in listening and repetition.	4/3/2, employed in both and in our own research, is described in S2 as an automatization activity. 4/3/2 incorporates elements of rehearsal, memorisation, repetition and free production. The listening & repeating procedure of S7 and shadowing are not entirely dissimilar. Shadowing is used in the current course in part to foster utterance memorisation. Sequencing of activities in our own programme follows this input-automatization pattern but also has cyclical elements, somewhat similar to the use of repetition within and across stages in *Access*. This is illustrated in Section 4.9

Criterion: Selection of FSs for Instruction	
Preselected DMs focused on by S2 (10 DMs) and S4 (59 DMs). These incorporated DMs in audio text (S2) and written text (S4). S4 selected DMs with diverse functions. S2 selection on grounds of 'type' (typical in speech, discourse function, fluency device) & 'learnability' (familiar, transparent, not long). S6 did not preselect but examined input, NS narrations, for evidence of FS use.	FSs were selected for instruction in our research on grounds similar to those of S2, rationale, criteria and selection are described in Section 4.8**.** FSs were also identified in audio input used, again this selection will be described further in Section 4.8.
Criterion: Testing Procedures	
S2 and S6 tested for fluency effects using pretesting and post-testing. S2 used a control group and delayed post-testing. Learners spoke for 2 minutes on one of 3 topics discussed in class, they did not know what test topic would be. Audio examined using range of temporal fluency measures. In S6, a case study, student delivered a narrative on a topic of personal relevance. No preparation time given. Not clear if student had choice of topic or how long she spoke for. S1 investigate correlation between perceived oral proficiency & FS use. It used 'blind' judges & a control group.	Present research is concerned with fluency effects, and not with oral proficiency, therefore procedures similar to S2 and S6 adopted: pretesting and post-testing carried out and a range of temporal fluency measures applied to audio recordings, described below. It was not possible to use a control group or to carry out delayed post-testing.
Criterion: Fluency Measures	
S2 employs the following temporal measures: mean length of pauses, phonation/time ratio, mean length of fluent runs, articulation rate. S6 uses just 2 temporal measures: speech rate and mean length of runs	S2 is interested specifically in testing for proceduralization, S6 was interested more generally in fluency effects. Measures employed in S2 are adopted. These are discussed in more detail in Section 5.2.1.
Criterion: Identification and Analysis of FSs in Tests	
S2 examined targeted FS use for accuracy and fluency in production. Nontargeted FSs included if used also by other students and had fluency/discourse function. S6 did not instruct targeted FSs. FS production identified using a range of criteria on form & function. FSs produced examined as per S2. S1 used 2 experienced 'blind' judges to separately count MWUs heard.	A combination of procedures needs to be used in the present study for identification of FSs in order to examine acquisition of targeted FSs, use of FSs present in input and evidence of competence in chunking. Untargeted FSs identified as per S6. Similar to S2 and S6, FSs are examined for accuracy of use, fluency of production of trained FSs, function and structure, range of criteria described in Section 6.3.

Of the seven empirical studies presented, it is clear from Table 4.1 that S2 (de Jong 2009a) and S6 (Wood 2009) are of most interest to the present research. The contrast in programmes

is striking. Wood's study involves the most comprehensive treatment of the four key elements noted at the beginning of this section, and does so within a classroom context using a wide range of activities and student interaction. In contrast the programme in de Jong's study is intensive, repetitive and involves students working by themselves at a computer console. Moreover, one of the techniques employed by Wood in his Fluency Workshop, 4/3/2 is the technique given intensive treatment in de Jong's study.

It was decided this marked contrast in programmes would be interesting to explore. While Wood's programme is very rich in activity and interaction, many of these activities would be quite innovative in the Irish language classroom. The novelty of an activity can have an impact on students' engagement. The researcher was also conscious that time constraints would not allow for repetition of many of the activities. It was anticipated that the intensive approach employed by de Jong would develop students' familiarisation and proficiency with a particular fluency technique. Davy and MacWhinney (2012) also make intensive use of repetition in their study and, in defence of this approach, suggest doing so gives instructors greater control over the items to be rehearsed and that 'sacrificing context in the name of providing repeated speaking practice on specific grammatical items and vocabulary will not completely negate the effectiveness of the practice' (2012). The limited technological facilities available to the researcher meant it was not possible to offer a programme corresponding directly to that offered by de Jong. In any case, it was not anticipated there would be strong interest among students in volunteering for a programme confined to student-console activities. It was therefore decided to develop two courses, one (Course 1) offering a rich variety of activity and interaction, and employing many of the activities which were used in Wood's fluency programme, and the other (Course 2) giving much more emphasis to repeated use of key techniques but also involving student-student interaction; in brief, an extensive treatment (Course 1) and an intensive treatment (Course 2). For clarity, discussion relating to both courses will generally refer to *Bladair[33]*, the name given to the programme.

As noted, innovation in the classroom can be threatening for students and remarks made by participants on the 'strangeness' of the focus on FSs by Jones and Heywood (2004) are probably well-founded. Older students, with many years of formal schooling and language classes behind them, may be quite resistant to an approach that is unfamiliar and where possible benefit is not always that easy to see. Some students may find oral production activities intimidating if these are not a regular part of classroom activity. Prior to

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[33] 'Bladair' was chosen with a touch of irony. The term can mean smooth talk or talk for talk's sake; 'Jim Gallaher has been blatherin' about goin' after the macker' (Ó Muirithe 1996:38).

commencing each course the basis for the overall approach and principal activities was discussed with students, and questions or concerns responded to. Care was taken to ensure that activities were clearly demonstrated and described to students and to ensure any potential embarrassment risk for students was minimised.

4.7 Central activities: shadowing and 4/3/2

There are two central activities in *Bladair*; shadowing and the 4/3/2 procedure. Both activities involve repetition. 4/3/2 involves the speaker producing and giving a repeated delivery of a narrative, shadowing involves repetition of another speaker.

Shadowing involves more than a basic repetition of a speaker, students are encouraged to closely imitate the speaker in pronunciation and also in rhythm, pace and intonation; in general, the prosody of the shadowed speech. Indeed, the activity itself inherently demands this close imitation. Shadowing lends itself easily to adaptation to meet particular ends[34] but essentially approaches involve close and repeated imitation of a speech segment. With repetition, learners should find themselves approximating the stimulus more closely. Shadowing exploits the functioning of the PSTM, discussed in Section 2.4.3, in particular through articulatory rehearsal. Shadowing also facilitates chunking processes by learners, as they follow the prosodic contours of the shadowed speaker, delineating phrasal chunks. This aspect can be enhanced further where written texts accompany audio input by modifying text layout, the discussion below of material used in Course 2 illustrates a possible modification.

For the programme the shadowing technique was introduced, demonstrated and discussed with students in a pre-shadowing class. Students were also given a handout summarising guidelines discussed for shadowing. Full details of this introduction and presentation of class materials for the two courses is given in Volume 2. Selection of audio is discussed in Section 4.8. Shadowing is an intense activity and for the student's own shadowing work, recordings were broken into shorter and more manageable narrative segments.

A transcript is generally used by students in shadowing. Wood explains the 'written text is read aloud while simultaneously listening to a recorded model… (learners) were encouraged to pay close attention to the formulaic sequences and hesitation patterns' (2009:49). While use of a transcript is indeed standard practice with the procedure, the present researcher had reservations about advising students to read aloud while simultaneously listening to a speaker. In part, this was due to an awareness that much of the Irish language student's time

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[34] For examples of peer-shadowing activites see Wiltshier 2007.

in class is spent reading, if silently. There was thus a concern that, when presented with an unfamiliar procedure, students might be drawn to a familiar component within that procedure, and *read* as opposed to *listen and read*.

The following procedures were therefore decided upon. In Course 1, prior to the shadowing class students were presented with the transcribed text as a gap fill exercise, with a focus on FSs identified by the researcher. Students checked their gap fill by listening to the audio. In the shadowing class, students were given the full transcript, with targeted FSs in bold, to look at when listening to the shadowed audio in full. The phrases or structures emphasised had been selected as FSs worth drawing awareness to, and selection criteria are discussed in Section 4.7. This handout was removed after students had listened to the speaker a couple of times and prior to students commencing shadowing.

In Course 1 shadowing was carried out in just one class, with preparation in the preceding class and a follow-up activity in the next class. In Course 2 shadowing is given a more central role, students shadowed in four classes, with a follow-up activity to each of these. The potential benefit of shadowing was seen to be enhanced by a follow-up activity drawing on shadowed material but in an interactional context. The role and use of the transcript was altered significantly in Course 2. Again the transcript was not presented as a text to be read, but this time an effort was made to modify the transcript layout to capture something of the prosodic character of the speech segment. It was hoped this consequently might benefit the student in the primary activity, that of prosodic imitation. It was also decided not to give the students a handout with the transcribed text but rather to present the text using PowerPoint. Three slides were used for each shadowing unit (a discussion of a particular topic) and each class comprised three shadowing units. Students worked independently through the presentation within a set time period but at their own pace. Within a shadowed unit each slide contained the same audio clip but slides were sequenced from full transcription (Slide 1) to gapped transcription (Slide 2) to audio only (Slide 3), thus permitting a weaning of dependence on written text.

The modification of layout of text is illustrated in Figure 4.1 below. In the first shadowing class the topic is family and in one particular speech segment the speaker is asked whether he gets on with his sister. The transcription of his reply is given below, with translation.

> Beag an baol. Ní réitímid lena chéile in aon chor. Tá sí ceithre bliana níos óige ná mise agus is peata ceart í. Tá sí chomh crosta le mála easóg ach cuireann mo thuismitheoirí an locht ormsa má bhímid ag troid. Ní fhaigheann an duine is sine cothrom na féine sa bhaile.

Fat chance. We don't get on at all. She's 4 years younger than me and she's a right pet. She's as cross as a bag of stoats but my parents blame me if we're fighting. The eldest doesn't get fair play at home.

An réitíonn tú go maith le do dheirfiúr?

Beag an baol!

Ní réitímid lena chéile **in aon chor**.

Tá sí ceithre bliana níos óige ná mise

agus **is peata ceart í**.

Tá sí **chomh** crosta **le** mála easóg

ach **cuireann** mo thuismitheoirí **an locht ormsa**

má bhímid ag troid.

Ní fhaigheann an duine is sine

cothrom na féine sa bhaile.

Figure 4.1 Slide 1, Shadowed Text

In the first slide the students meet, the text has been modified in two ways. Firstly, as for Course 1, certain phrases are in bold text in order to emphasise them. The second modification is more radical. Line ends are changed in a manner that brings to light the discourse structure, for example conjunctions are generally positioned at line beginning. Text layout also attempts to correspond more closely to speech pausing and to help prompt chunking awareness. The text is thus modified to highlight chunking both in terms of a phrasal lexicon and of speaker prosody across phrases. In addition, the lines vary in length. In Figure 4.1, for example, the shortest line has 3 syllables, the longest 12 syllables. The shorter line has a quick rhythm and rhyme, but the longer lines give learners practice in intonation and stress across longer phrases.

An réitíonn tú go maith le do dheirfiúr?

_____!

Ní réitímid lena chéile _____ .

Tá sí ceithre bliana níos óige ná mise

agus _____.

Tá sí _____ crosta _____ mála easóg

ach _____ mo thuismitheoirí _____

má bhímid ag troid.

Ní fhaigheann an duine is sine

_____ sa bhaile.

Figure 4.2 Slide 2 , Shadowed Text

With Slide 2, shows in Figure 4.2, the student is required to give particular attention to the *spoken* text in order to supply the phrases indicated by underscore. It is anticipated that shadowing this slide a number of times will prompt memorisation of these FSs
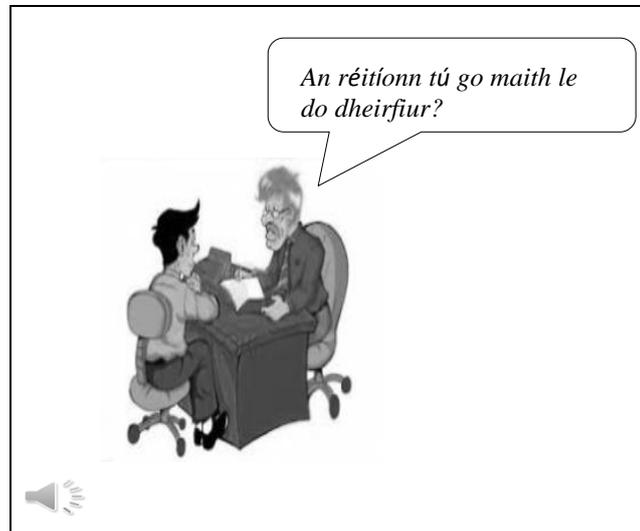
Figure 4.3 Slide 3, Shadowed Text

Slide 3, shown in Figure 4.3, presents students with a visual prompt, a cartoon simulating an all-too familiar situation for students and the playback symbol employed on all slides. The only text on Slide 3 is the stimulus question, delivered also in the audio clip.

It is hoped that the text modification in addition would assist students with accurate acquisition of more challenging structures. Commenting on Levelt, Funk states:

> [T]he rising amount of research on the role of formulaic language and its contribution to both fluency and correctness clearly indicates that the amount of prefabricated chunks available in the lexematic store may be of much greater relevance to oral competence than the conscious grammatical encoding procedure' (2012:301).

Davy concluded from her repetition study that 'for complex sentences breaking down into phrases leads to more robust learning, for long sentences practicing as full sentences helps performance' (Davy 2013). The sentence *Is bréa liom na suímh mar is bealach maith é chun labhairt le cairde nach bhfeiceann tú go minic* (translation below) has a long verb complement and a relative clause with a highly inflected verb phrase. On the presentation slide the text was arranged to make the grammatical structure more transparent, at all times preserving the natural pause boundaries:

Is bréa liom na suímh	I love the sites (social media)
mar is bealach maith é	because it's a good way
chun labhairt le cairde	to speak with friends
nach bhfeiceann tú go minic.	that you don't see often.

Preparation of input in this manner can be seen to accord with Wray's 'Needs Only Analysis' model of learning from input, described in Chapter 3 'nothing is broken down unless there is a specific reason' (Wray 2008:17); the rationale for text modification is precisely to say to the learner this is not a text to be read in a conventional way, this is a text to be spoken in a NS manner.

Each shadowing session in Course 2 began with a brief shadowing of the FSs targeted in *Bladair,* described in Section 4.7. The FSs are presented in a consistent way throughout *Bladair,* and grouped under discourse function headings, as shown in Table 4.2**.**

The 4/3/2 procedure is also a repetition activity and has been proposed and practised as an oral fluency activity. This procedure was developed by Maurice (1983) but is associated in particular with Nation (1989). Nation (1989) researched fluency and accuracy effects of the task and found there were significant gains for fluency and greater number of complex constructions used (see also Arevart & Nation 1991). Learners first prepare a narration using brief notes. They subsequently deliver this narrative three times. Nation highlights three aspects to this narration (1989:379):

- Each time the narration is delivered to a different listener, so there is a real communicative context.
- Each time the speaker repeats the same narrative, which gives the speaker growing confidence in their ability to deliver narration.
- The first narration is delivered in 4 minutes, subsequent narrations in 3 and 2 minutes. This time pressure prompts a more fluent delivery and encourages speakers not to introduce new material.

As mentioned earlier, Wood (2009) employs this activity in his Fluency Workshop and de Jong and Perfetti's study (2011) explores the fluency effects of 4/3/2. Wood includes a step after the third narration, learners at that point record their talk without notes, and later 'the learners reviewed their own and each other's performances and commented on aspects which they felt had shown development from the first to the third production' (Wood 2009:121). In de Jong's and Perfetti's study learners did not narrate to partners but recorded themselves at a console. They could see their notes on screen as they were narrating. After each narration, students completed a handout on which there were statements which they ticked pertaining to the fluency of their performance, they also ticked statements about what they would try to change in the next narration.

4/3/2 is engaged with in two classes in Course 1. In one it is used as a follow-up activity to

the shadowing class. Students were presented with a handout with a reminder of the FSs highlighted in the narration they had shadowed and of the main points discussed by the speaker. Their task was to deliver a narration on the same topic, with the option of delivering their own personal narrative or assuming the 'persona' of the shadowed speaker. Either way they were encouraged to use as many of the targeted FSs as they could and advised their listening partners would be expecting to hear these in use. Their partners were provided with a checklist and were asked to tick FSs they heard in use.

In the second 4/3/2 class the targeted FS was an instructed sentence builder (SB) with a strong topic focus or turn function. The SB is discussed in Section 4.6. In a preparatory class, the use of this SB was demonstrated and students practised using it in a game with prompts enhancing both the formal 'structure with slots' quality of phrase and its discourse function. 4/3/2 was then used to reinforce discourse function. Students in pairs prepared a narrative using a picture prompt and directions on incorporating a narrative turn. In pairs they delivered the narrative to one other student, one student delivered the narrative up to the narrative turn, the other narrator picked up the narration at that point. These roles were reversed in turn on the second and third delivery.

In Course 2, 4/3/2 was employed more frequently and more regularly, at the end of each shadowing class and in the class subsequent to each shadowing class. At the end of each shadowing class the procedure employed was similar to that of de Jong and Perfetti's study (2011). Students were given a handout with prompts, targeted FSs and guide questions on shadowed topic. In including the list of targeted FSs on this handout, cognisance was taken of remarks made by Henry (1996), 'once the learners have learned one token, i.e. one concrete realization of a lexical phrase type, the teacher must then create situations in which the lexical phrase type can be used with the necessary paradigmatic/syntagmatic variations to develop pragmatic competence' (1996:298). When ready, the student recorded their narration. Using a handout supplied they reviewed that delivery and prepared themselves for the subsequent narration. This handout uses review questions similar to those employed by de Jong and Perfetti (2011). The follow-on class was interactive, students were given back the handout with their preparation notes from the previous class and delivered their narration in the manner described by Nation (1989) above, and again reviewed their delivery at the end of each narration. It was decided to enhance the interaction in this session, giving students an appreciation of listening as an active process[35]. Listeners were advised:

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[35] Suggestions have already been noted in Section 3.8.2 that interactional competence should be considered an essential aspect of speaking competence. It was also stated this is not an aspect under specific consideration in the present study.

- On listening to a first narration, to encourage the speaker and demonstrate understanding using appropriate phrases, including some of the targeted FSs.

- On subsequent narrations, to continue to use phrases as above but in addition to interject every so often with a simple and appropriate question. Listener involvement of this nature was encouraged in an effort to make the delivery more conversation-like, and also to give listeners themselves more production practice with targeted FSs.

After each narration listeners also filled in an evaluation form which they then showed to the student delivering the narrative. This evaluation form was passed on to the student next listening to the repeated narration, who followed the same procedure.

Mingle Jigsaw and Dictogloss featured in Wood's Fluency Workshop and were used to foster prosodic awareness. Both activities involve strong interactive tasks. Materials were prepared for use of these activities in *Bladair*. Dictogloss was found to be quite challenging for participants in the pilot study and was modified for Course 1. As already explained, Course 2 was focused on intensive use of shadowing and 4/3/2. More comment on the students' experience of the core course activities is provided in Chapter 6. Other activities employed in *Bladair* are standard classroom activities such as quizzes and circle discussions, with prompts and bonuses for targeted FS use integrated throughout. Such practice activities were included to stimulate and enhance chunk storage and retrieval in a interactional and fun context.

It remains to make a brief comment on shadowing and 4/3/2 as complementary activities. In Section 4.6 it was stated that *Bladair* employs both independent work at a computer and classroom interaction. Shadowing is a procedure carried out by learners working on their own. While potentially of great benefit, the activity is intense. It lacks the interest and enjoyment potential of interactive engagement with another human being. Yet such interaction in a second language can be cognitively demanding and restricted, depending on the individuals' linguistic competencies. In Course 2 an effort was made to exploit the potential complementary nature of these activities. Shadowing a speaker on a topic gave learners a model for structuring responses on this topic, as well as a host of useful lexical chunks. An intermediate stage between shadowing and independent narrative discourse with another learner was provided by the 4/3/2 procedure carried out by students by themselves, immediately after the shadowing procedure. Broadly speaking, the activities can be seen as complementary in two ways. Firstly, shadowing as employed in *Bladair* is solitary while 4/3/2 is interactive. Secondly, shadowing focuses primarily on development of prosodic features while 4/3/2 involves effective management of discourse structure. Of course in

Bladair both activities were also use to automatize production of FSs.

4.8 Selection and treatment of FSs

Throughout *Bladair* there is a focus on developing students' awareness of chunking in speech, prompted to a greater or lesser extent by all activities engaged in; in section 4.9 this is illustrated through an analysis of separate activities from Course 1 and Course 2. Alongside this concern with chunking processes in general, *Bladair* incorporates a complementary focus on targeted FSs. The most immediate difficulty faced was that of selecting FSs for attention. It was noted in Section 1.4 that the corpus of spoken Irish is, comparatively speaking, very small. Resources such as frequency lists or concordance tools are very limited and based primarily on written text. The selection was guided partly by the literature on FSs, such as Nattinger and DeCarrico's (1992) classifications. Intuition and personal experience as a teacher also came into play with regard to assessing frequency and potential benefit of FSs. Consideration was also given to the type of input typically met by students, both in audio and written text. There is a familiarisation effect with frequently met items which meant course participants were likely to have 'internalised' some of the FSs selected to some degree, and that *Bladair* would be building on that prior knowledge. Discourse topics and discourse structures of likely relevance to the participants was given attention, guided in particular by the Leaving Certificate Oral exam requirements, discussed in Chapter 1. The final selection comprised of three groups: a set of some 30 FSs which, as discussed below, were termed narrative devices, FSs in shadowed input and two sentence builders. Sentence builders were not instructed in Course 2, the rational for this is made clear in the discussion on Course 1 and 2 in Chapter 5. Each group was given different treatment, both in terms of duration of instruction and type of intervention.

Narrative Devices

The functional importance of discourse markers (DMs) was discussed in Chapter 3. Of the studies described in Section 4.4, only two focus on targeted FSs, in both cases these are DMs. Hernández (2011) outlines three reasons why the L2 learner has difficulty with DM acquisition: they lack saliency because of their low communicative value, they are multifunctional and the meaning of DMs is often highly contextualised, and finally, they can occur in middle and final position of an utterance, positions less salient for the language learner. For his study he targeted 59 DMs which have narrative function, by and large those selected function in terms of giving cohesion to a text.

De Jong (2009) selected ten DMs from Nattinger & DeCarrico (1992). Criteria used were

used to guide the selection were:

- typical for spoken discourse

- learnability: familiar, transparent meaning, length

- length: too short, no thinking time gain; too long, challenge to remember correctly

- usefulness as a discourse device

- discourse function could be elicited by the task requirement

Similar criteria was used in making the selection for *Bladair*, but apart from DMs it was also decided to include phrases frequently used in speaking serving a variety of other functions: expressing evaluative stance, addressing interlocutor, fillers and modifiers. Raupach's (1984) comments on formulae classification are insightful in this regard, and particularly apt for the present study which is concerned with the fluency role played for formulaic language. He first acknowledges the 'fuzzy boundaries' around criteria for classification, and suggests consideration should be given to the aim of the investigation and to the purposeful use of lexical items by the individual learner:

> … we suggest as a starting point a distinction that, although based on linguistic principles, may be valid for a psycholinguistic interpretation. It is the distinction between:
> 1. speech events which do not have an immediate impact on the structure of the utterance "in process" but which, among other things, serve to give the speaker additional time for his planning activities and
> 2. organizers which contribute to the development of ongoing speech in that they help the speaker to structure his performance on the text level as well as on the sentence and phrase levels (Raupach 1984:122-123).

The term, narrative devices (NDs) is adopted for the total group selected. This label was felt to be appropriate as the main speaking activities engaged in through *Bladair* are delivery of brief anecdotes. Such tasks were seen to be of relevance in addressing students' more immediate needs, the 'conversation' component in the Leaving Certificate exam is essentially an opportunity for candidates to tell short personal anecdotes. In *Bladair* itself, however, the term *Frásaí Cairdiúla* 'Friendly Phrases' was used for this group of NDs in discussing them with participants and on course materials.

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Table 4.2 details the NDs selected for *Bladair*. There are some minor differences between the phrases selected for both courses, indicated by bracketed number after phrase, due mainly to some phrases initially selected being too similar in form and function. Most of the NDs selected would be familiar to course participants, all Higher Level Irish students of Irish. The longest phrases are probably amongst the most familiar to students of Irish, *tá a fhios agat, an bhfuil a fhios agat* (you know, do you know) and *chomh maith leis sin* (as well as that). Most of the other NDs are two or three word phrases. The function of many corresponds

closely to the equivalent English DM and the English equivalents for seven of the targeted DMs are amongst the top nine two-four word chunks most frequently used in spoken English (O'Keeffe et al. 2007). Some of the phrases would not be seen in written texts typically met by students, such as phrases with clear listener focus. Phrases such as *bhuel* (well), borrowed from the English, and *ó sea* (oh yes) which function very easily as fillers, were included. Treating these phrases as linguistic items as worthy of attention as genitive case inflection was a source of great amusement to some participants. The use, and usefulness, of these, along with vagueness terms *saghas, cineál* (kind of), and hedging devices *n'fheadar* (I wonder, suppose) in speaking was briefly discussed with participants. Many DMs, as stated by Hernández, are multifunctional or have subtle semantic use. Some of the targeted DMs used to express opinion can mark subtle distinctions in degree of certainty, made clear through intonation or context. The challenge presented by a lack of appropriate resources that would facilitate students' appreciation of such features, and their own confident use in such DMs, is discussed in Chapter 7.

The NDs selected were given strong attention in *Bladair,* using a variety of interventions: noticing, awareness, exploration, production. They were also revisited cyclically over the course. Four functional categories are adopted in *Bladair* for ND classification. Table 4.2 details these categories. The classification headings themselves are, to a certain extent, notional: *Toipic, Léiriú, Tuairim, Éisteoir,* 'Topic, Illustration, Opinion, Listener'. The headings were selected as readily intelligible for participants, and as categories whose functional relevance could be easily appreciated. The importance each ND plays in speaking, conversation and narration was briefly discussed with students. These categories, along with the multifunctional qualities and semantic subtleness of some NDs, are initially explored by students themselves through a classification task where it is stressed to students that many of the NDs could easily be placed under two or more headings, i.e. many NDs are multifunctional. A follow-on activity has students insert their selection of NDs in a transcribed text and then 'speak' that text to other students. The full activity is described in delivery notes for Class 2 in Volume 2. To enhance familiarisation with the selected NDs, however, all handouts used in activities demanding ND use were consistent in using the same headings and groupings, illustrated in Table 4.2. As already mentioned, in Course 2, participants shadowed a recording of these NDs at the beginning of each shadowing class.

Table 4.2 Selected narrative devices
(Bracketed number = Course 1 or 2. ND targeted in this course only)

Toipic	Topic	Léiriú	Illustration
Chomh maith leis sin	As well as that	Abair	(Let's) say
Agus rud eile	And another thing	Cuir i gcás	Take for example
Bhuel	Well	Go háirithe	Especially
N'fheadar cad eile	I wonder what else	(Tá sé) cosúil le	(It's) like
Ó sea...	Oh yes	Mar shampla	For example
Ar aon nós	Anyway	Saghas, cineál	Kind of
Sin é is dóigh	That's it I suppose		
Seo mar atá sé (1)	That how it is		
Sin a bhfuil (1)	That's all		
Ar dtús (2)	First of all		
Tuairim	**Opinion**	**Éisteoir**	**Listener**
Is – ní dóigh liom	I think, suppose	An bhfuil a fhios agat?	Do you know?
Déarfainn (fhéin)	I'd say (myself)	Tá a fhios agat féin	You know yourself
Is cosúil	It seems	D'fhéadfá a rá	You could say
B'fhéidir	Maybe	An dtuigeann tú?	Do you understand?
Is dócha	Probably, it's likely	Mar a déarfá (1)	As you'd say
Cinnte	For sure, certainly	Gan amhras (2)	Without doubt
N'fheadar	Not sure, I wonder	Sin díreach é (2)	That's just it
Ar ndóigh	Of course, for sure		
Táim ag ceapadh (1)	I'd say		
Go deimhin (1)	For sure		

FSs in Shadowed Input

It was felt that the shadowing procedure leant itself very readily to an enhanced focus on FSs. As already mentioned, in Course 2 prior to shadowing narratives students shadowed a speaker delivering each of the targeted NDs. In addition, chunks were identified in the narrations of the shadowed speakers themselves for attention. To prompt chunk noticing in students, a routinized procedure was adopted. In every speech segment shadowed a number of chunks were given attention. Thus, for example, a shadowed segment of 25 seconds would on average have 6 targeted items. A wide variety of FSs were selected, employing the criteria used for DMs but also considered factors such as reinforcement of targeted DMs, useful exemplars of important grammatical structure, idiomatic use and lexical extension of core phrasal verbs. To return to the speech segment met in Section 4.7, Table 4.3 shows the chunks focused on and rationale for selection.

Table 4.3 Examples of shadowed FSs

Chunk	Function	Comment
Beag an baol 'fat chance'	Emphatic negative assertion	Idiomatic expression Easy to memorise – alliterative – rhythm 3 x 1 syllable words
in aon chor 'at all'	Emphatic negative assertion	Very high frequency of use Easy to memorise, rhythm as above
is peata ceart í[36] 'she's a real pet/the family pet'	Mildly critical, generally affectionate in tone	Colloquial expression Easy to memorise, close to English expression Exemplar of copula use, a difficulty for many learners of Irish
chomh [crosta] *le* [mála easóg] as cross as a bag of stoats	Descriptive simile	Simile structure
cuireann [mo thuismitheoirí] *an locht ormsa* my parents blame me/put the blame on me	Statement	Use of verb, *put* with preposition *ar.* Frequently used structure, *cuireann [sé fearg] orm* 'it angers me'
cothrom na féine fair play, justice	Descriptive lexical item	Idiomatic expression Quite common

In the Pilot Study and Couse 1 FSs were likewise focused on in the shadowed texts but, in addition, students did memorisation and chunking activities with sections from a narration on 9/11, discussed in Section 4.8**.** The objective of these activities was primarily one of awareness, to explore the structuring of a complex narrative, rather than to foster acquisition.

Sentence Builders

We discussed sentence builders (SBs) in Chapter 3 and noted that SBs are regarded as complex FSs, potentially of great value to the language learner. The present study is interested in exploring the effect of instruction in SBs and selected two of these, in bold text, from the 9/11 narrative: *bhí an fearg tosnaithe **ach ba é an rud ba mhó a** bhí orthu **ná** conas gur éirigh le duine éigin é seo a dhéanamh leo,* 'people had started to get angry **but the main thing that** bothered them was that **someone had succeeded in** doing this to them'.

Both SBs were considered to be of high value for use in narration, one in describing achievement and the other in topic management. Both have reasonably challenging grammatical structures:

éirigh le + O + participle

an rud + COP-Tense + ADJ-Superlative + ná

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[36] Interestingly 'the English *pet* comes from the Old Irish *peta,* a tame or domesticated animal' (Ó Muirithe1996:148).

Using Dictogloss, Mingle Jigsaw, a quiz and 4/3/2, activities were developed focused on these SBs. These activities were designed to prompt awareness of the structures of these SBs, their meaning and function in discourse, and to give students staged repetition practice with them (drills – gap-fill – semi-controlled production with prompts – free production). Course 2 did not include these classes. In Chapter 6 students' use of all instructed FSs (NDs, chunks from shadowed texts, SBs) in pre-tests and post-tests is discussed.

4.9 Selection of audio input

In the Introduction, it was noted that preparation for *Bladair* in many ways began with an interview heard on Raidió na Gaeltachta. Ten years after the event, Helen Ní Shé, a native Irish speaker and a journalist with the station, recounted her first-hand experience of witnessing the events of 9/11 (Raidió na Gaeltachta 2011). Her account was immensely engaging. The development of accompanying activities and materials proved to be both extremely interesting and demanding. Working with this narration was also quite demanding for students, even when working with brief extracts with adjusted tempo and the provision of support materials. However it was of intrinsic interest to them because of the strong story and skilful delivery.

The 9/11 narrative was used primarily to explore chunking and narrative structuring, and to develop memorisation skills. It was not used for productive fluency development and some activities using it, having been included in the pilot study, were dropped from Course 1. We have seen that Course 2 makes intensive use of shadowing and 4/3/2 and does not use the 9/11 audio at all.

Finding audio suitable for the shadowing work was quite challenging. A trawl through podcasts lead to discarding one after the other: too interactive, too colloquial, too fast, too hesitant… natural speech in full flight. A book aimed primarily at independent adult learners of Irish, *Speaking Irish* (Ní Mhaonaigh & Mac Lochlainn 2008) proved of interest. This well-designed, innovative and thoughtful book, with accompanying CD, explores features of spoken Irish through a focus on brief narrations delivered by native or strong speakers of Irish on a variety of topics. Narratives judged to be of interest to course participants were selected and materials prepared accordingly.

The increased use of shadowing on Course 2 meant more audio material had to be found, however more suitable material could not be found in *Speaking Irish,* a book targeted at an adult population. A conventional class text-book was therefore examined. Audio

accompanying these recordings is clearly scripted, with some efforts made by both text authors and actors to deliver responses that 'sound' natural, with appropriate intonation and speech rhythms; nevertheless they lack the colour of natural speech. Using this audio had considerable benefits however, the topics discussed were relevant to young people and the delivery was very accessible. In Table 4.4 a brief comparison is made of a 15 second extract from each of the three resources considered.

Table 4.4 Audio comparison over 15s of speech

is is cuimhin liom an mhaidin sin maidin Dé Máirt eh ab ea í 'I remember that morning, it was Tuesday morning' *spéir ghorm* 'a blue sky' *míorúilteach gléineach gléineach gorm a bhí os cionn Nua Eabhrach* 'there was an amazing clear, bright blue sky over New York' *eh thugas faoi ndear an spéir a bheith chomh geal agus mé ag dul chun oibre eh trasna na habhann go* 'eh I noticed the sky (being) so clear as I was going to work across the river to' *go dtí New Jersey* 'to New Jersey'	**Helen Ní Shé, Raidió na Gaeltachta** 5 runs in section Longest run 4.7s Variation in run lengths perhaps reflects narrative content, speaker is delivering a dramatic narrative, reconstructing elements of time, place and colour.
is dócha gur rugadh agus togadh muid ar fad le peil Ghaelach 'I suppose we were all born and raised with Gaelic football' *agus bhí sé eh bhí sé ag mo mhuintir i gcónaí bhí sé ag mo mháthair agus bhí sé ag m'athair* 'it was eh my family were always involved, my mother and my father'	**Donncha, Speaking Irish** 2 runs in section Longest run 8.4s Speaking of personal experience, and repetition of a sentence frame may be factors in length of runs and ease of delivery.
imrím peil Ghaelach, 'I play Gaeilic football' *thosaigh me ag imirt nuair a bhí mé sa bhunscoil* 'I started playing when I was in primary school' *mar go raibh mo mhúinteoir ina threanálaí sa chlub áitiúil* 'because my teacher was a trainer in the local club' *agus spreag sé an rang chun clárú sa chlub* 'and he encouraged the class to register with the club' *is aoibhinn liom peil*, 'I love football' *bím ag traenáil gach deireadh seachtaine* 'I train every week-end' *agus uair amháin sa tseachtain*, 'and once during the week' *is maith liom a bheith aclaí*, 'I love being fit'	**'Eoin', Fiúntas** 8 runs in section Longest run 2.5s Each speech run contains a complete clause. Three conjunctions are used to join coordinate clauses. An unusual delivery of 8 complete clauses in succession is perhaps the feature that most distinguishes this extract from those of Donncha and Helen.

4.10 Programme, Course 1 and Course 2

Both courses comprised of 10 one-hour classes, delivered over two weeks. Table 4.5 presents the programme for Course 1 and Table 4.6 the programme for Course 2.

Table 4.5 Course 1 programme

No	Class Activity	Fluency Focus
COURSE 1		
1	**Story Reconstruction, Disappearing Text** Listen to 9/11 narrative, reconstruct text on storyboard using cards with narrative chunks. Deliver narration orally, each student with narrative chunk, text gradually removed.	Awareness: language chunking and narrative structure. Memorisation activity. Practice with speech runs and delivery as phrases.
2	**Introducing Narrative Devices** Classifying range of NDs. Narrative listened to, students insert NDs into text and read.	Awareness: commonly used phrases with function in speech. Practice with these.
3	**Narrative Devices & Quiz** Quiz rewarding ND use, time pressure, questions banal/mildly amusing	Production of NDs in speech, frequent but correct use rewarded.
4	**Narrative & Mingle Jigsaw** Return to 9/11 narration. Narrative chunks distributed orally, students interact and compile narration on storyboard.	Listening, speaking Memorisation of runs Narrative compilation
5	**Shadowing Preparation** Groups do gap-fill activity with transcript of speaker they will shadow. Listen to audio when discussing responses. Shadowing presented.	Gap-fill prompts awareness of FS use. Understanding of shadowing activity and procedures to be followed.
6	**Shadowing** Students listen to and shadow recording of speaker on computer, followed by gap-fill activity and recording reading of text.	Awareness: pronunciation, intonation, speech rhythms. Development of these aspects through imitation.
7	**4/3/2 Narration** Students to deliver narrative of shadowed speaker, prompts to use targeted FSs.	Fluency development across narrative retellings. Awareness in speaker and listener of FSs.
8	**Sentence Builder** Dictogloss with SB 'x managed to Y'. Game explores structure, demands students supply missing item(s). Bonuses for ND use.	Awareness: narrative chunks, structure, phrase prosody. Awareness of SB structure. Practice with SB and NDs.
9	**Sentence Builder** Explore SB, 'the thing that most – was'. Pairs prepare narrative using SB. 4/3/2/ shared delivery.	Fluency development across retellings. Practice with SB, delivery highlights function of SB.
10	**Quiz** Short answer and long answer questions, demanding use of specific types of ND	Awareness: ND function. Practice with use in short responses and brief anecdotes.

Table 4.6 Course 2 programme

COURSE 2		
No	Class Activity	Fluency Focus
1	Introduce key activities: 4/3/2 and shadowing. Prepare for shadowing activity. Explore selected NDs (as for Course 1, Class 2).	Awareness: fluency features, shadowing & 4/3/2 as fluency techniques. Functions of NDs in speech. Practice with these.
2	Topic: Family Life Shadowing brief narratives on topic, FSs enhanced. 4/3/2 delivery of student's own narrative, prompts for ND use.	*Shadowing* Awareness: pronunciation, intonation, speech rhythms. Development of these aspects through prosodic imitation. Enhanced awareness of useful structures, phrases.
3	4/3/2 delivery of student's prepared narrative, prompts for ND use. Listeners with interactive and review role. Roles reversed.	*4/3/2* Repeated narration after shadowing class prompts recycling of chunks from audio. Prompts to use NDs. Review before/after repeated delivery prompts awareness of fluency aspects of own performance.
4	Topic: Home Place As for class 2	
5	As for class 3	
6	Topic: School Life As for class 2	Repeated narration to other students in subsequent class: as above but in interactive situation. Role of listener in listening to various narrations, responding, asking questions, and reviewing of benefit to listener and speaker.
7	As for class 3	
8	Topic: Interests As for class 2	
9	As for class 3	
10	Quiz prompting use of NDs. Discussion of experience with course.	Practice: ND production Group review: language learning and variety of possible approaches to this.

4.11 Proceduralization in Course 1 and Course 2

The discussion on proceduralization in Chapter 2 indicated three distinct stages to fluency development in the classroom. *Bladair* attempts as much as possible to engage with these stages cyclically, within individual classes, as well as sequentially, across the course.

Awareness
Of speech as comprised of runs between pauses
Of lexical chunking
Of the function and use of targeted FSs
Of phonologic features of speech
Of narrative structuring

Practice
Repetition of targeted FSs and speech chunks
Memorisation and delivery of chunks
Repetition of narrations

Production
Use of targeted FSs
Use of FSs more generally

To illustrate, a single activity, *Disappearing Text,* from Course 1 and shadowing combined with 4/3/2 in Course 2 are examined. While there are many variants of *Disappearing Text,* essentially this involves presenting a complete text to students for their attention, successive versions of the text have elements gapped which students complete with original items or appropriate substitutions. In a manner described already in Section 4.7, the transcription was laid out in a way that 'tries to capture something of the prosodic character of the speech segment'. Over the following slides an increasing amount of text 'disappears', leaving a scattering of function words and lines indicating speech segments on the final slide. To lead into this activity, students were first given slips of paper with individual speech segments and, in groups, tried to reconstruct the narrative. They checked their work by listening to the recording. Slips were put away and the text was projected to the class. They listened again to the audio, giving attention to pronunciation and rhythm. Each student was assigned a segment to memorise, then after a practice run the first gapped text was shown. The group delivered the narrative repeatedly over slides 2, 3 and 4. On their final delivery they tried to match the speed of NS delivery, without racing! Table 4.6 also illustrates the proceduralization stages of shadowing combined with 4/3/2, as employed in Course 2. Volume 2 presents full details of programmes, schedule, delivery notes and materials.

Table 4.7 Illustration of proceduralization stages and course activities

Course 1 Class 1 'Disappearing Text'	Proceduralization Stage (with/without interaction)	Course 2 Classes 2 - 9 Shadowing with 4/3/2
Interaction Physical handling of slips and negotiated reconstruction of text prompt awareness of speech segments and narrative structuring Repeated listening to audio with modified transcription on screen draws attention to use of runs and chunking in speech, and phonological features of delivery	**AWARENESS**	Listening to audio prompts awareness of phonological features. Working with modified transcriptions prompts awareness of FS use and of narrative structures. *Interaction* Self-review, and review of and by other students, draws attention to fluency features.
Interaction Repetition of runs and repetition in delivering narration. Students encouraged to help each other if stuck, i.e. to 'co-construct' delivery.	**PRACTICE**	Repeated shadowing, progressively working more with audio and less with text. *Interaction* Repeated delivery of recorded narration. Repeated delivery of narration to partner.
Interaction Final delivery is essentially unsupported. Challenge to approach NS delivery.	**PRODUCTION**	Encouraging Incorporation of shadowed material in narrations. Preparation and delivery of narrative for recording *Interaction* Preparation and delivery of narrative for partner

4.12 Conclusion

The contribution of relevant research on FS acquisition and studies on memorisation and repetition to the design of the research course, *Bladair,* has been established and illustrated in this chapter. The principles and rationale underpinning selection of core activities, audio and targeted FSs has also been presented, along with a detailed illustration of how proceduralization processes are encouraged by the use and sequencing of various activities. In the next chapter, the research questions to be addressed by the present research, and the methodology employed for investigating these, is discussed.

Chapter 5 Methodology

5.1 Introduction

In this chapter attention is given to the research questions which the study aims to address are presented, along with derived hypotheses. Six questions in total are presented. The first two are at the heart of this research, and address the issues of proceduralization and FSs. The following two questions relate to more specific aspects of course effects: exploring competence level effect and impact on linguistic accuracy. The shadowing activity presented an opportunity to explore its impact on reading-aloud fluency and the final research question investigates this. Effects on attitude and motivation are not researched as part of this study but participants were asked to give feedback with regard to their experience of the respective courses and the final research question examines this. A rationale is given for the methods employed to implement the research programme, and for the use of mixed methods. Testing procedures are then described.

In the remaining sections the participant profile and the delivery of the pilot study is described. Findings from the pilot study are discussion, along with resulting revisions to *Bladair*. Finally, the delivery schedule for the two courses is detailed with some brief comments.

5.2 Experimental design

Bladair is designed to be delivered in the classroom, though Course 2 involves a number of sessions at a computer console. For practical and ethical reasons, random selection for participation was not feasible. The study is therefore quasi-experimental. For practical reasons, it was also not feasible to use a control group. The compromises entailed regarding control of variables are acknowledged but unavoidable, the study is located in a real-world context. The researcher herself is also the teacher delivering the two courses, again this situation was unavoidable. It is hoped that the relatively short duration of the period of instruction and the qualitative aspect of the testing redresses, to some extent, the lower level of control entailed in quasi-experimental studies. It is important to assert that, in the context of educational research, real-world research has a valuable contribution to make. The dynamics and variables at play in real-life classroom learning are, to a greater or lesser extent, still present and participants' engagement and responses not mitigated as they might be if the study was located in an entirely different context, such as a language laboratory.

The design chosen conforms to the 'one group pretest-post-test' design, as described by

Cohen et al. (2007). Employing the symbols and conventions used by these authors, the study might be represented in the following manner:

O – measurement of spoken fluency over period of time

X – exposure of participants to instruction in FSs

Experimental, Course 1 $O_1 X_1 O_2$

Experimental, Course 2 $O_1 X_2 O_2$

In addition to pretesting and post-testing of participants, comparison is made between the two groups, the participants of Course 1 and Course 2

5.3 Sampling strategy

The research employed convenience sampling, seeking voluntary participation from appropriate groups (i.e. senior cycle Higher Level students) that were accessible to the researcher. As such, 'it does not seek to generalize about the wider population' (Cohen et al. 2007:114).

5.4 Research questions, hypotheses and data collection

Data collection and testing procedures were determined by the research questions and guided by relevant research studies in oral fluency. De Jong and Perfetti (2011) are interested in assessing an aspects of cognitive fluency, proceduralization, and the measures they use in combination to establish evidence of proceduralization in learners have been adopted. These measures are presented below. Naturally, as the main research interest is in the effect of FS acquisition on fluency, it is necessary to specify procedures for identifying FSs in students' test recordings. Investigating proceduralization is central to the data analysis but the impact, if any, of proficiency levels on course effects is also of interest. Research questions 1 and 2 (RQs) are the central questions in this study, other questions serve in main to provide more nuanced information or explore specific aspects of the students' speech. Each hypothesis is briefly commented on and the measures employed to provide the relevant data described.

5.4.1 Research question 1

RQ1: Will fluency gains attested after participation in the programme, *Bladair* indicate proceduralization of linguistic knowledge has taken place?

Two hypotheses are derived from this RQ, the second hypothesis is linked to the first.

Hypothesis 1: Where there is evidence of fluency gains following on from participation in Bladair, these fluency gains will show evidence of proceduralization.

At the core of *Bladair* is its concern with prompting proceduralization. That concern is pivotal in the examination of research design in Chapter 4. It would not be a matter of great surprise after an intensive course on speaking Irish that some participants would show fluency gains, what is of central interest for the research at hand is to establish whether a programme focused on fostering a specific type of cognitive processing results in fluency gains, and to establish a connection between these conditions.

Procedures

Temporal measures for fluency were discussed generally in Chapter 2. For the purpose of this research, measures which were employed by de Jong and Perfetti (2011:538) in their study on proceduralization effects arising from the 4/3/2 repetition activity were adopted. They used four in total:

1. Mean length of pauses (MLP), measured in seconds.

2. Phonation/time ratio (PTR), the percentage of time speaking (not including silent pauses and nonverbal fillers) as a percentage of the total time taken to produce the speech sample (including pauses and nonverbal fillers).

3. Mean length of runs (MLR), the mean number of syllables produced between pauses

4. Articulate rate (AR)

De Jong and Perfetti (2011) refer in their paper to Towell et al. (1996) who argue that these measures taken alone are not reliable indicators of proceduralization. Frequency and length of pause can vary depending on task and speaker characteristics while longer runs, on the other hand, may be contributed to by longer pauses. It is therefore only when the measures are taken in combination that we have indicators for proceduralization. De Jong and Perfetti describe two patterns which give evidence of proceduralization (2011:558)

- increased MLR, stable MLP, stable PTR – speakers producing longer stretches of speech without have to pause more for planning

- decreased MLP, increased PTR, stable MLR – speakers producing same length of speech runs but with less pausing for planning.

The fourth measure noted by de Jong and Perfetti, articulation rate, is described as 'a measure of the speed of articulatory processes and is thus not strongly related to the proceduralization of lexical and syntactic knowledge' (de Jong & Perfetti 2011:539). Because the present study is not interested in effect on speed, it was decided not to include this measure in our research. The two patterns of proceduralization described by de Jong and Perfetti are discussed in relation to the present study findings in Section 6.2.1.

Hypothesis 2: Measures for fluency gains and proceduralization will be stronger for Course 2.

In Chapter 4, Course 2 was described as more intensive and more restricted, thereby allowing participants greater familiarisation with central techniques and more extensive practice work. It is predicted the combination of these factors will prompt proceduralization processes of targeted NDs more than the broader scope of Course 1. Quantitative data presented for Hypothesis 1 will be used to address Hypothesis 2.

5.4.2 Research question 2

RQ2: Where there is evidence of proceduralization, is this related to the use of targeted formulaic sequences, untargeted formulaic sequences or both?

The programme *Bladair* was designed to foster proceduralization through FS acquisition. It combines a focus on selected FSs, in particular a set of NDs, and a focus more generally on chunking in natural speech, with activities centred on memorisation and practice. It is anticipated that the focus on a closed set of NDs will enhance students' awareness of the functional role of these items, and that practice activities will activate proceduralization of them. The following predictions are therefore made:

Hypothesis 3: Targeted NDs will show evidence of proceduralization.

Hypothesis 4: The use of targeted NDs will make a significant contribution to fluency gains that arise.

<u>Procedures</u>

Confirmation of Hypotheses 3 and 4 will require a combination of quantitative and qualitative analysis. It was noted in Chapter 2 that proceduralization implies a qualitative change has occurred in lexical storage of an item, that production rules are embedded with the item. It is argued in Chapter 3 that production rules of NDs and FSs pertain to the discourse and pragmatic contexts of their use, and not just to aspects of phonology and grammatical inflection (aspects conditioned in part by context). Identifying targeted NDs in transcriptions is relatively straightforward but lexical identification only provides preliminary evidence of FS use. To claim that use of FSs has contributed to fluency we need to demonstrate that multi-word units in particular are being produced as FSs, as proceduralized chunks, and not analytically. Alas, there is no ready litmus test that can verify conclusively proceduralization, and the present researcher is unaware of measures employed in the literature for this precise purpose. A number of measures are therefore used in combination to substantiate claims for proceduralization. In tandem with transcription inspection, recordings will be listened to carefully, hesitation phenomena in production of

potential FSs will be noted and the audio spectrogram will also be inspected for evidence of an intonation contour. It will also be necessary to examine if FSs and speech chunks are used in a way that is apt and promotes fluency in a discourse. The procedures adopted, in summary, relate to:

- articulation characteristics: indicating chunk production and ease of production

- accuracy and aptness of use: indicating chunk retrieval, both of ND form and function

- narrative function: indicating competence in use of ND for discourse management and/or as a communicative strategy.

If Hypothesis 3 is supported, quantitative measures can be used to explore Hypothesis 4. Pretest and post-test counts will be presented for NDs for both courses.

Hypothesis 5: There will be evidence of greater use of FSs, other than targeted NDs, by students.

Hypothesis 6: The contribution of nontargeted FSs to fluency gains will not as great as in the case of targeted NDs.

A central aim of *Bladair* is to foster participants' awareness of chunking and of FS use more generally in speech. Apart for the targeted NDs, repeated and varied use is made of some audio input, and participants engage in the 4/3/2 procedure several times. It is anticipated, therefore, that there will be evidence of greater use of FSs by participants. However, it is anticipated longer exposure and ongoing practice routines may be required to bring about noticeable changes in speech production.

Procedures

A detailed examination of three potential sources for other FS use by students is carried out and these are analysed employing procedures similar to those outlined for Hypothesis 3, a combination of quantitative (counts) and qualitative (contextual) analysis. The first source is nontargeted NDs, 15 were preselected for examination. The second source consists of phrases present in the shadowed audio.

Finally, to establish if there is evidence of a more general chunking effect from *Bladair,* a template of eleven FS functional categories was developed, using criteria employed by Wood (2009). As the application of this set of criteria is time-consuming, inspection of untreated FSs is carried out on a third of participants, randomly selected. Measures and procedures for this analysis are described in more detail in Section 6.3.5.

5.4.3 Research question 3

RQ3: Do fluency gains come at the expense of accuracy?

Hypothesis 7: Post-test accuracy measures will not be lower than pre-test measures.

In Chapters 2 and 3 the possibility of fluency gains impacting negatively on linguistic accuracy is mentioned. It was noted above that proceduralization of items entails the lexical item and rules of use are stored, and retrieved, as one. It is also clearly understood, from the discussion of fluency in Chapter 2, that speech rate is not the only factor in fluent production. Students generally will not be encouraged to talk faster, and this is stressed particularly when involved in the 4/3/2 activity. It is not anticipated that increased use of FSs will result in increased difficulties with accuracy of linguistic production in the narratives.

Procedures

Where frequent or basic grammatical errors occur in post-tests, careful scrutiny will be given to the pre-test transcript of those particular students to locate examples of similar structures. This will enable a comparison of competence in use of these structures before and after treatment.

5.4.4 Research question 4

RQ4: Does use of targeted narrative devices (NDs) reflect the competence levels of students?

Hypothesis 8: Higher ability students will both employ more targeted NDs and use a greater range of these than lower ability students.

Hypothesis 9: Lower ability students will use targeted NDs to support their spoken narratives. These FSs will generally be employed in linguistically simple environments.

Hypothesis 10: Higher ability students will demonstrate competence in using targeted NDs in linguistically complex environments.

This question pertains to proficiency levels, and suggests that use of FSs will differ according to competence. The question, prompted by remarks made by Schmidt (1992) noted in Section 2.4**,** on the need for investigation into 'the interplay between routinized and creative speech', will require careful scrutiny of the frequency and types of FSs employed, of the linguistic context within which they occur, and of the overall proficiency level demonstrated by the student within the narration. It has been argued in Chapter 3 and above that proceduralization of FSs entails an understanding of use. However there is choice in both the type of ND selected, and in the syntactic and discourse context of use. Some of the targeted NDs would have been familiar to students, others less so. Lower ability students

typically overuse certain lexical items. Hypothesis 8 proposes that both numbers and range of NDs used will reflect competence differences. NDs may stand as an independent clause, prefacing a narrative, or be embedded in a complex construction. It is expected that patterns of use will reflect students' competence, as asserted in Hypotheses 9 and 10.

Procedures

Language proficiency is measured, somewhat imprecisely, by results in the Junior Certificate exam, to ensure clear divergence in competence only high proficiency and low proficiency students will be used. Hypothesis 8 will be addressed by taking counts for functional categories. Hypothesis 9 and 10 entail close contextual and discourse examination of ND use by the sample group.

RQs 2, 3 and 4 all relate to aspects of FS use. Response to the three questions will be informed by a general overview of FS use by students. Where FSs are used, students' production will be examined with regards to:
- types used
- context of use
- frequency of use
- accuracy and appropriateness of use
Analysis of use of this nature can tell us something more generally about learner acquisition of FSs and about the specific contribution FSs can make to learners' oral fluency development. Such insight could make a valuable contribution to the development of pedagogical materials and practice.

5.4.5 Research question 5
RQ5: Does shadowing a spoken text result in fluency gains for the student in an oral reading of this text?
Hypothesis 11: Delayed oral reading of a shadowed text will show fluency gains.

It is anticipated that shadowing benefit for oral fluency will transfer to a spoken reading activity.

Procedures

Fluency gains will be established by measures of accuracy, reading rate, pause boundaries and speech runs. A comparison will be made between the pre-test and post-test readings, and the reading of the speaker shadowed using these measures.

5.4.6 Research question 6

RQ6: Is an intensive approach to fostering fluency motivational for students?

Course 1 and Course 2 employ different approaches to developing L2 fluency, described in Chapter 4, and Hypothesis 2 involves making a comparison between fluency gains that might arise in Course 1 and Course 2. These courses can also be compared with regard to the participants' experience. While both make strong use of repetition and memorisation, Course 1 offers an extensive range of activities and more opportunities for interaction in a variety of tasks. Course 2, on the other hand, employs an intensive engagement with two activities – shadowing and 4/3/2. An intensive approach is inherently demanding, combining an intensive approach with repetition may have a downside in lowering students' engagement with the course.

Procedures

At the end of the course a feedback form will be distributed to participant. A discussion of feedback from participants will be considered in addressing this question.

5.4.7 Summary

The research questions and hypotheses presented above, along with a summary of measures adopted to address each of these, are presented in Table 5.1.The numbers of participants involved in each case is also given, and methods are classified as either qualitative (Qual) or quantitative (Quan). Both are employed in this research, and in the following section the rationale for using a mixed methods approach is discussed.

Table 5.1 Research questions, hypotheses and test measures

	RQs and Hypotheses	Data set	N n=27	Quan *Qual
RQ 1	Will fluency gains attested after participation in the programme Bladair indicate proceduralization of linguistic knowledge has taken place?			
H1	Where there is evidence of fluency gains following on from participation in Bladair, these fluency gains will show evidence of proceduralization.	MLP, PTR, MLR	27	Quan
H2	Measures for fluency gains and proceduralization will be stronger for Course 2.	As above	27	Quan
RQ 2	Where there is evidence of proceduralization, is this related to the use of targeted FSs, untargeted FSs or both?			
H3	Targeted NDs will show evidence of proceduralization.	Contextual analysis: articulation and use	27	*Qual
H4	The use of targeted NDs will make a significant contribution to fluency gains that arise.	Counts	27	Quan
H5	There will be evidence of greater use of FSs, other than targeted NDs, by students.	Counts for sample set of nontargeted NDs, plus shadowed & other FSs	27, 9	Quan
H6	The contribution of nontargeted FSs to fluency gains will not as great as in the case of targeted NDs.	Counts	27	Quan
Q3	Do fluency gains come at the expense of accuracy?			
H7	Post-test accuracy measures will not be lower than pre-test measures.	Counts	9	Quan
Q4	Does use of NDs reflect the competence levels of students?			
H8	Higher ability students will both employ more targeted NDs and use a greater range of these than lower ability students.	Counts	6	Quan
H9	Lower ability students will use targeted NDs to support their spoken narratives. These FSs will generally be employed in linguistically simple environments.	Contextual analysis Case study	3	*Qual
H10	Higher ability students will demonstrate competence in using targeted NDs in linguistically complex environments.	Contextual analysis	3	*Qual
RQ 5	Does shadowing a spoken text result in fluency gains for the student in an oral reading of this text?			
H11	Delayed oral reading of a shadowed text will show fluency gains	Counts for accuracy, reading rate, pause boundaries and runs.	12	Quan
RQ 6	Is an intensive approach to fostering fluency motivational for students?	Presentation of general comments, discussion	27	*Qual

5.5 Mixed methods research

While most of the data is collected through quantitative measures, qualitative measures are used to address H3, H9 and H10, along with RQ6. In the discussion of the research questions and hypotheses, the use of either qualitative or quantitative methods was determined solely by the nature of each particular hypothesis. H2 relates to an overall indication of proceduralization in speech production, manifest in global temporal aspects of speech. H3 relates to proceduralization of discrete linguistic items, making a case that such items are proceduralized requires 'stacking up the evidence', looking at various aspects of the utterance to build a multi-dimensional and more complete picture of it, and to be able to justify claims as to whether the utterance appeared proceduralized or not.

H9 and H10 both require a wide-ranging contextual analysis, looking at both syntactic and discourse environment. In addition, the small sample size meant that quantitative measure would give very limited insight into the aspects of interest. As already indicated, it was for this reason that a case study was carried out, which entailed examining the characteristics of the overall narrative, and which proved to be quite suggestive.

RQ 6 relates to experience of the course. The feedback form used by participants was designed to give them an opportunity to express their views on the course and their overall experience of it, and some interesting observations were made by participants which are discussed. It had not been intended to focus in this research on participants' experience, while appreciating the value in doing so. The matter is returned to in Chapter 7.

Mixed methods research (MMR) is not unusual in applied linguistics. Factors such as motivation, attitude, learning styles and interactional dynamics have long been considered important components of the language learning experience, and MMR would appear particularly appropriate for small scale and classroom based research. Addressing H3, H9, H0 and R6 using the qualitative methods proposed brings the analysis close to the individual student and their experience and brings a different, a complementary, dimension to study findings. In an extensive survey of MMR research in Applied Linguistics, it is asserted that:

> [Q]ualitative and quantitative phases of research can be mixed to achieve complementarity. This expands the explanatory power of any MMR study, because different data types and analysis are appropriate for different research questions and processes… quantitative and qualitative results may be drawn upon to interpret different aspects of the phenomenon (Riazi & Candlin 2014:144).

5.6 Testing procedures and data collection

Speech Samples

Pre-testing with students who volunteered to participate in *Bladair* was carried out a week before commencement of the programme and post-testing carried out within a week after the programme.

Similar to testing in de Jong and Perfetti (2011) testing comprised of a 2 minute narration. Six topic cards were used, each card had a topic heading and prompt questions see Appendix 3. It was decided to prepare a number of cards because if only a few were employed students yet to be tested might be tempted to do some advance preparation. Two cards were selected randomly by the researcher and participants chose one of the two to talk about. The topics were non-controversial and similar to topics commonly explored in students' textbooks. The researcher advised students a time card would be used to let them know firstly, there were just 15 seconds left, and secondly, just 5 seconds left and that they could wind up. They were given about thirty seconds to prepare themselves, and they then commenced their narrative. On some rare occasions when students were stuck the researcher paused the recording to help them get back on track. Course 2 participants began their pretesting and post-testing with a reading of a shadowed text. The same procedures were employed for pre-testing and post-testing, however the topic prompt card used by a particular student in the pre-test was removed from selection. Wav recordings were made of all tests using a digital recorder.

Recordings were imported into *Praat 5.3.18* and transcribed by the researcher. Full transcriptions are given in Volume 2. Pause boundaries were first set using a Praat function, in accordance with procedures adopted by de Jong and Perfetti (2011). They defined a pause as 'silence or a nonverbal filler of 200 ms or longer' (2011:545, with an upper limit set to 2.5 standard deviations above the mean in a student's speech, they explain '[exceptional] long pauses, usually around 3 or 4s, would not be an indication of the students' fluency or proceduralization' (2011:545). Boundaries were checked by listening to the audio and inspecting the spectrogram, making adjustments where necessary. A Praat script 'get pause duration' was used to generate data on pause lengths, this in turn established data on PTR. MLR was ascertained by manually counting syllables. This test data is presented in Chapter 6.2.

Participant feedback

Forms were distributed to participants at the end of the last class. The researcher guided students through each form, clarifying any uncertainties. Feedback forms were anonymous.

5.7 Participants

Bladair was designed for and offered to Senior Cycle Higher Level Students of Irish. Selection of participant group was determined by two considerations. Individual differences such as ability in subject, learning style, or background in Irish are not a primary focus of this study. The concept of formulaicity underpinning the research is deep (in terms of the acquisition path we wished to prompt) and broad (in terms of range of FSs), and a concern in treatment design was to establish an approach that clearly reflected and addressed the dimensions of this concept. In terms of the programme, this entails working with language input that is linguistically rich, and engaging in language activities that are quite sophisticated and diverse. It was decided, then, to work with a group where a reasonable degree of competence and motivation amongst the participants could be assumed.

The Pilot Study and Course 1 were offered to 5th year students, Course 2 was offered to 6th year students. Over the two courses the age profile was mainly 17 – 18 years. The Pilot Study was delivered in an all-girls school, Course 1 and 2 in an all-boys school. With consent from the school principal and co-operating teachers, the researcher met interested students at an information meeting where the course was briefly described, and students' questions and concerns addressed. Students were given information leaflets and assent forms for themselves and their parents, with contact details for the researcher supplied, see Appendix 4. Students were given one week to consider their participation on the course. There were 23 participants in the pilot study, 20 in Course 1 and 13 in Course 2.

The Pilot study group and Course 1 group came from unstreamed classes, consequently there was a considerable diversity in terms of ability in Irish and motivation levels. Among the groups there were students who were not yet fully committed to taking Higher Level Irish but were keeping their Leaving Certificate options open, students who were clearly struggling with the language level, and students hoping to get Grade A in the Leaving Certificate exam. Junior Certificate results indicate a proficiency range from A2 to B2. This diversity proved quite challenging and is discussed further in Chapter 6 and 7. Competence diversity was evident even in Course 2, which had the smallest number of participants and where participants all came from a lower-stream Higher Level class.

All who expressed participation in the course were gladly accepted. It was not envisaged this might be a problem, assuming that anyone volunteering to participate was motivated to do so primarily because of their interest in Irish. Unfortunately, this was not always the case. This issue is returned to in Chapters 6 and 7.

5.8 Pilot study: findings and revisions

Bladair was piloted with a Fifth Year class of 22 students in an all-girls school. The class was an unstreamed Higher Level Irish class. The course was delivered during their regular Irish class time, a 40 minute period, and twice a week over two weeks.

End of course feedback was generally positive, 75% agreed or strongly agreed the course helped give them a sense of sounding more natural in the way they speak Irish. By and large the students seemed to enjoy the activities and to find the course focus and approach interesting. This response was encouraging but a great deal was learned also from the difficulties encountered in delivery of the course.

Above all, there was a sense of there being too much activity involved in many classes and of classes being too rushed. At times an assistant would have been greatly appreciated by the researcher to help with group organisation, handout distribution, technical hitches and more! The class period of 40 minutes was reduced further by the time taken to move in from another class, and the regular interruption with school notices has already been mentioned. Many of the classes were simply too busy. Most of the tasks and activities were new to students, and students occasionally were unclear about tasks because instructions were not thorough enough or were given too quickly. Not enough time was allowed to introduce techniques, or talk more generally about speaking and the relevance of techniques to developing oral competence. There was not enough time allowed for regular reviews with students, to check in with them and to remind them regularly of the 'road-map'. With most classes involving different and novel activities, there was a sense at times of the course lacking coherency for some students. This problem was not helped by the course being spread out over six weeks. The opportunity to address difficulties and concerns, to reinforce insights, and to build on skills being practised was lost with a gap of five days between some classes. Bearing this in mind, classes in Courses `1 and 2 were scheduled to be delivered on a daily basis over two weeks.

Some of the activities, with regret, had to be disposed of to allow more time for presentation of activities and increased practice time, these class materials are included in Volume 2. Some activities had proved too challenging and required modification. In particular, greater recognition had to be given to the reality that the typical student has a very restricted engagement with NS input, noted in Chapter 1.

The testing procedure employed, a five minute open conversation with students, posed immense problems for fluency analysis. The method of analysis adopted in the research,

discussed in Section 5.6, is not one of examiner rating. To facilitate quantitative analysis, audio files were to be run through a speech analysis programme and this entails working with clean speech samples. The interactive nature of conversation, with overlaps and interruptions, created difficulties in marking clear boundaries around students' speech. Testing procedures were therefore completely revised and the revised procedures have been described in Section 5.6.

5.9 Delivery of courses

The courses comprise of 10 one-hour classes, delivered over 2 weeks. Of necessity, classes were held during a study session in the evening, outside of the school day. Delivery of both courses presented challenges. Extra-curricular demands meant there were some absences from most classes, attendance figures for both courses are given in Appendix 5.

Despite revisions to Couse 1, some classes were still pressurised for time. Other demands on students meant absences from some classes, which created difficulties at times in follow-on classes. It became clear that some students were not strongly committed to the course, as mentioned in 5.2, and this also took from effective delivery of some classes. The shadowing class was demanding for the sole instructor, particularly on Course 1 where students only engaged in the activity once. Some students had difficulty accessing audio files and some were unclear about task, hence the instructor had little time to give to general monitoring of students during the class. Nevertheless, most students were positive in their overall response to the course.

In many ways Course 2 was an easier course to deliver. There were fewer participants and most were strongly committed to the course. Above all, the nature of the course meant delivery was easier. The course basically involved four repetitions of two techniques, consequently students became very familiar with these activities. In a review, some were able to describe how they had developed their own approach to shadowing. The researcher found regulation of the classes in general much smoother. Unfortunately the second part of the shadowing class, the 4/3/2 procedure, was always foreshortened and rushed, mainly due to factors outside of our control. However for the shadowing activity itself the researcher was able to give more attention to monitoring students, encouraging them with their efforts, and commending them on specific aspects of their delivery. On the other hand, with repetitions of the same text it was more difficult to sustain interest levels within students and the shadowing, in particular, was found by them to be demanding and tiring. The researcher felt on occasions they had to be 'marched through' the stages. Again, overall feedback was

positive. Feedback from the two courses is presented in Chapter 6.

There were 33 participants in total in *Bladair*. It was decided to exclude five participants from data analysis as each had been absent for 50% or more of the course. 13 from Course 2 did pretest and post-test, however due to audio corruption one had to be eliminated. 13 from Course 2 did the reading test but audio for three was corrupted, leaving 10 for analysis. Table 5.2 details the numbers for testing analysis. Each participant was given a pseudonym which is used in the presentation of all data in this study.

Table 5.2 Numbers of participants analysed

	Narrative Task	Reading task
Course 1	15	n/a
Course 2	12	10

5.10 Conclusion

Six research questions and eleven hypotheses derived from these, along with testing measures and procedures, have been presented and discussed in this chapter. The chapter thus sets the foundation for an indepth examination of the effect of participation in *Bladair* on participants.

Chapter 6 Results and Discussion

6.1 Introduction

Having described in some detail the guiding principles, design and delivery of *Bladair*, it is time now to explore the effects of the course on participants. This exploration will be structured and directed by the research questions (RQs), proposed in Chapter 5, which underpin the present study. In this chapter RQs are reformulated as hypotheses. Data, extrapolated mainly from pre and post-testing, will then be presented to address these hypotheses in turn. Presentation of data is accompanied by a detailed discussion of its relevance to the hypothesis in question. A particular extensive discussion is carried out in relation to the potential contribution of FSs to fluency gains as this requires close examination of the post-test corpus. The concluding point for this discussion is to confirm or deny the validity of the particular hypothesis or to acknowledge a conclusion cannot be drawn one way or another.

Extracts from participants' narratives, available in full in Volume 2, are presented as follows:

1. Participant code name

2. Test (pretest or post-test)

3. Line no. in transcript. Each line comprises a speech run, as specified by procedure described in Section 5.6.

4. Utterance in italics. Minimal notation marks used. Underscore is used to indicate an incomplete utterance or false start, and xxx is used to indicate unclear item. In case of ambiguity, some errors are noted by angle brackets, < >

5. Translation

E.g.   Fionn Post 34 *<d'imigh> mé rugbaí*   'I played rugby'

Tadhg Pre 27 *a dhéanamh g_ gach oíche*   'to do every night'

Colm Pre 32 *sa sa xxx* 'in the, in the xxx'

6.2 RQ1: Fluency gains and proceduralization

There are two hypotheses to be addressed pertaining to this research question.

6.2.1 Hypothesis 1

Where there is evidence of fluency gains following on from participation in Bladair fluency gains will show evidence of proceduralization.

The temporal measures relevant to establishing both fluency gains and proceduralization were introduced in Chapter 5.2. To recap, these are:

1. Mean length of pauses (MLP), measured in seconds.

2. Phonation/time ratio (PTR), the percentage of time speaking (not including silent pauses and nonverbal fillers) as a percentage of the total time taken to produce the speech sample (including pauses and nonverbal fillers).

3. Mean length of runs (MLR), the mean number of syllables produced between pauses

Following the testing procedures described in Chapter 5.6, data was extrapolated on MLP, PTR and MLR. Table 6.2 presents data for each of these measures for Course 1 and 2.

Table 6.1 Fluency data Course 1 and 2

	Pre Test		Post Test		Difference		p-value
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	
MLP							
Course 1	1.15	1.16	0.94	0.73	-19%	-37%	1%
Course 2	1.28	1.06	1.01	0.72	-21%	-32%	0%
PTR							
Course 1	0.58	0.06	0.62	0.05	8%	-17%	2%
Course 2	0.54	0.07	0.64	0.06	18%	-14%	0%
MLR							
Course 1	5.02	1.18	5.06	1.26	1%	7%	77%
Course 2	5.06	1.14	5.71	1.27	13%	11%	14%

Two tailed paired t-tests were performed for each course to compare the PTR, the MLP, the articulation rate and the MLR pre and post-test. The results are as follows:

MLP

The MLP showed statistically significant differences pretest and post-test for both courses. For Course 1, $t(14) = 3.04$, $p = 1\%$. For Course 2, $t(11) = 3.74$, $p = 0.3\%$. The following box plot provides a visual description of the reduction in MLP for both courses.
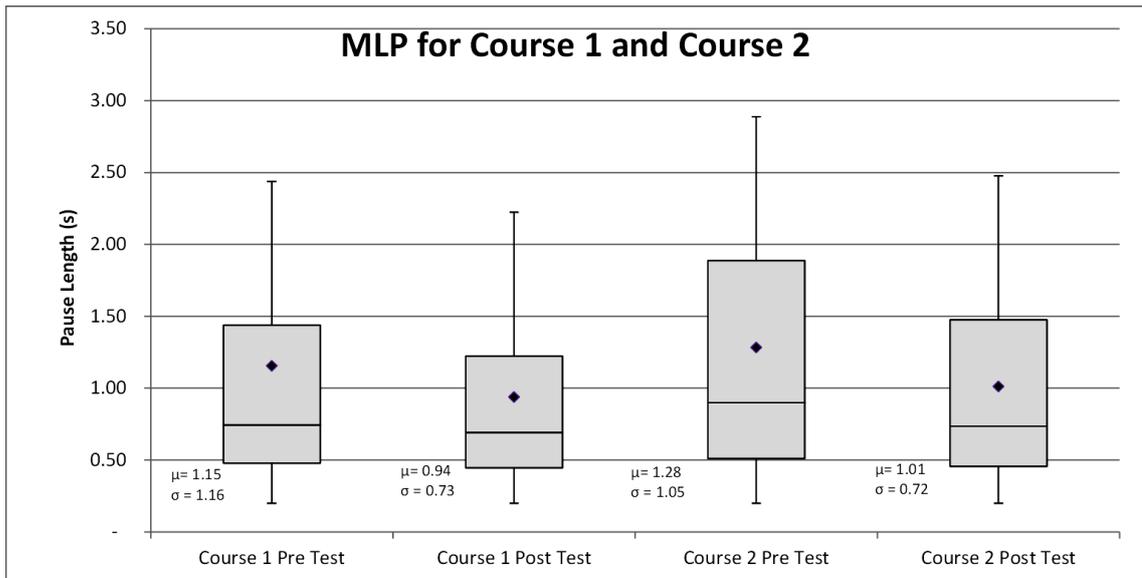
Figure 6.1 Box plot MLP pretest and post-test

PTR

The PTR showed significant differences pretest and post-test for both courses. For Course 1, $t(14) = -2.65$, $p = 2\%$. For Course 2, $t(11) = -5.34$, $p = 0.02\%$. The following tables show, by student, the PTR pre (continuous line) and post (broken line) test, and visually describe that the PTR is higher post testing than pre-testing.
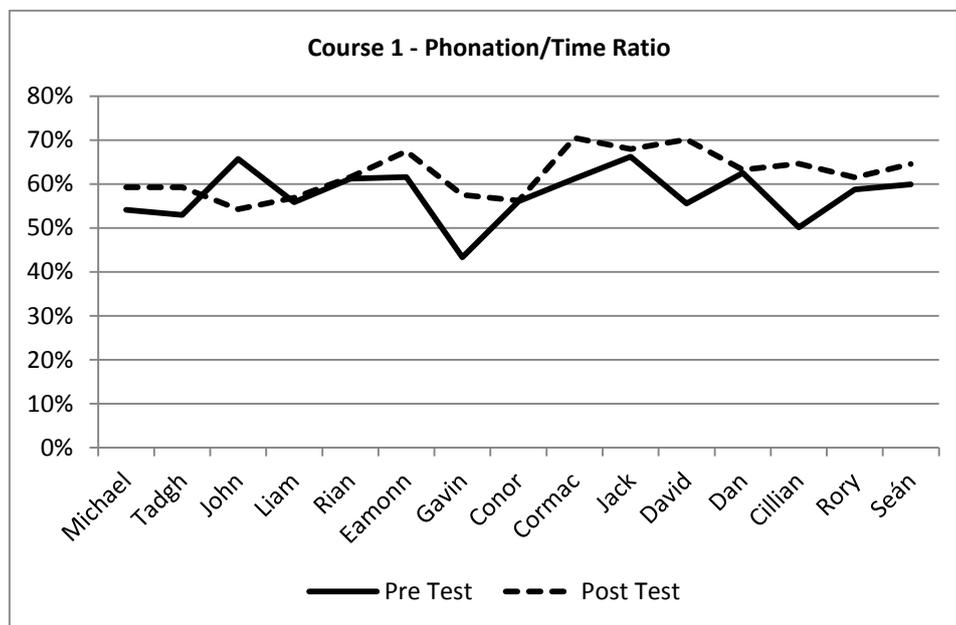
Figure 6.2 PTR pretest and post-test Course 1
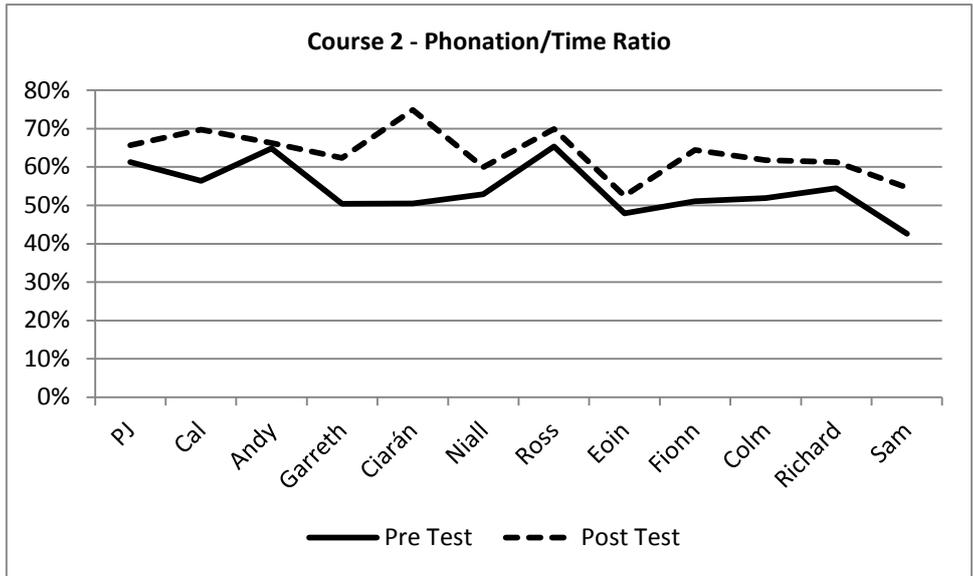
Figure 6.3 PTR pretest and post-test Course 2

MLR

The MLR did not show significant differences pretest and post-test for either course. For Course 1, t(14) = 0.3, p = 77%. For Course 2, t(11) = 1.6, p = 14%. The following tables show, by student, the MLR pre (continuous line) and post (broken line) test, and visually describe that there is little difference in the MLR pre and post- test.
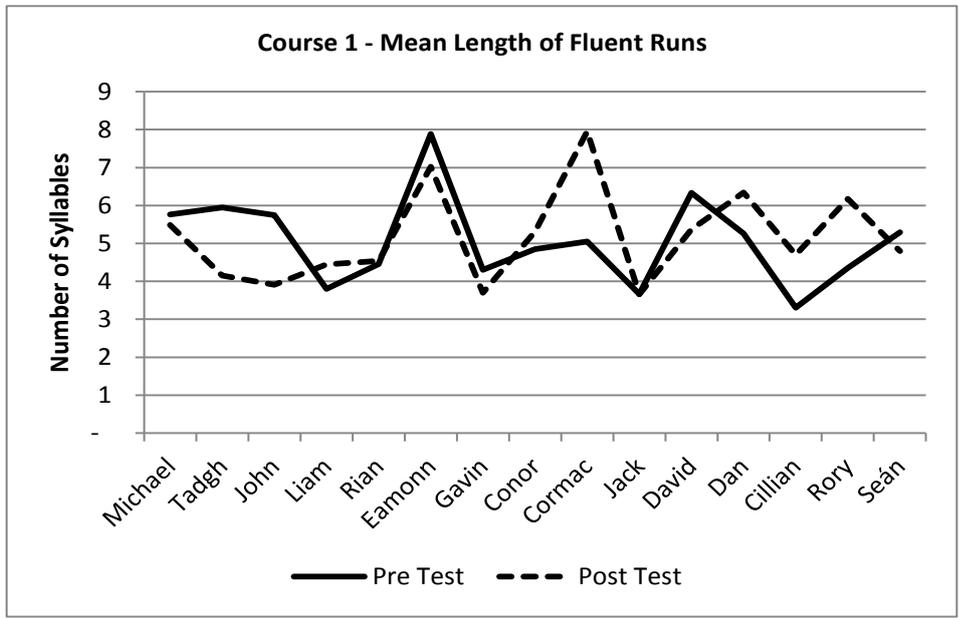
Figure 6.4 MLR pretest and post-test Course 1
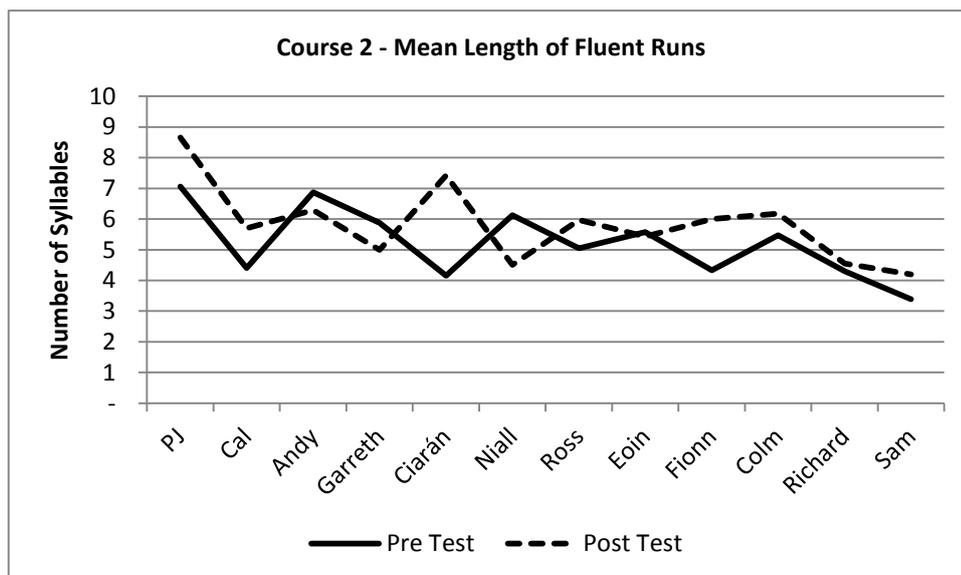
Figure 6.5 MLR Pretest and post-test Course 2

In Section 5.4.1 it was asserted these measures need to be considered in combination in order to be able to demonstrate if quantifiable data indicates a change in cognitive processing commensurate with proceduralization. The two patterns which de Jong and Perfetti (2011:559) claim give evidence of proceduralization were also described, it is appropriate to restate these.

Pattern 1: Increased MLR, stable MLP, stable PTR: speakers producing longer stretches of speech without have to pause more for planning

Pattern 2: Decreased MLP, increased PTR, stable MLR: speakers producing same length of speech runs but with less pausing for planning.

The results for *Bladair,* Courses 1 and 2 conform to Pattern 2 and thus attest to fluency gains as a result of proceduralization. It is important, therefore, to examine this pattern in more detail before commenting on it in as a description of *Bladair.* Figure 6.6 below is a schematic representation of Pattern 2.

Pretest				
Speech δ δ δ δ (5 syllables)	*Pause*	*speech* δ δ δ δ (4 syllables)	*pause*	*Speech* δ δ δ δ δ (5 syllables)

Post-test						
Speech δ δ δ δ δ (5 syllables)	*pause*	*speech* δ δ δ (4 syllables)	*Pause*	*speech* δ δ δ δ (5 syllables)	*pause*	*speech* δ δ ……

Figure 6.6 Proceduralization Pattern 2
(time constant across tests)

In Figure 6.6 MLR is stable in the post-test with a mean of 5 syllables. MLP has decreased and PTR has increased, there is an extra speech run post-test. The fact that PTR has increased is important. If PTR is stable where MLR is stable and MLP has decreased, this indicates the speaker is pausing more often. The two changes, decreased MLP and increased PTR, represented schematically in Figure 6.6**,** and by testing data in Table 6.1, indicate that the speaker pauses for shorter periods of time (as opposed to less often) and that the speaker speaks more in the allocated time overall. Of course there are many reasons why speakers may pause, some of these were explored in Chapter 2.2**.** In testing circumstances where speech task and environment are replicated, and data demonstrates that the speaker's pauses are shorter *and* that they speak more, it is reasonable to conclude the speaker is able to speak more without requiring more planning time[37]. In brief, data presented for Course 1 and 2 suggests that fluency gains are contributed to in part at least by speech segments that are proceduralized and Hypothesis 1 is supported.

Wood asserts that within fluency literature '[L]onger runs are a key indicator of fluency' 2006:15). Tests results for *Bladair* leave us with an important question then, why did the MLR of participants not increase significantly? It is not possible to do more than speculate here. We have seen that the typical student of Irish is not provided with extensive speaking opportunities. In the classroom speaking opportunities for many may be largely confined to answering a teacher's question. A short answer may suffice for the teacher; a short answer may be safer for the student. Individual factors might also be significant. Limited linguistic competence might account in part for the somewhat choppy, episodic nature of some of the participants' narratives. Some transcripts show a lot of repetition of basic structures within narratives. These might have functioned to some extent as an established default setting , with students falling back easily on a familiar and brief routine to extend their narrative (*is maith liom,* 'I like'; *ceapaim,* 'I think'). Students may have needed a longer programme to develop skill in extending runs, rather than simply changing topic. They may also have needed a longer programme to become more adept at using NDs in more internalised positions both within speech runs and within narratives. More generally, it is possible that individual differences with regard to speaking style are also a factor, as noted in Section 2.2.

6.2.2 Hypothesis 2

Hypothesis 2: Measures for fluency gains and proceduralization will be stronger for Course 2.

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[37] It is conceivable that this pattern could also be contributed to by pausing internal to speech runs or by speakers stretching syllables longer. The researcher listened carefully to all tests and found no evidence of such features post-test.

Hypothesis 2 asserts that fluency gains and evidence of proceduralization will be more marked for Course 2. We have already seen that the improvement in MLP is similar in both Course 1 and Course 2. However, the improvement in PTR in course 2 was 18% and the improvement in course 1 was only 8%. While both of these improvements are statistically significant, the improvement in course 2 is more significant than the improvement in course 1. It is suggested this is due to the more intensive engagement with key activities and repeated practice opportunities which were afforded to participants in Course 2. Exploring the factors underpinning the improved PTR in Course 2 over that of Course 1 necessitates a close examination of transcripts for evidence of FSs. This examination is particularly relevant to the next three RQs and differences of note in performance across courses will be highlighted in the course of the following discussion. For now it is proposed to assert that Hypothesis 2 is also supported by the fluency measures already presented.

6.3 RQ2: Fluency gains and FSs

Four groups of FSs are examined[38]. The following procedures will be employed to identify and establish FS use.

1. Targeted NDs. Count targeted NDs in transcripts. Examine closely the production of these NDs and discuss their production and use. Specific procedures for this examination are given in Sections 6.3.2 and 6.3.3.

2. Nontargeted NDs. Count nontargeted NDs in transcripts. A method for selecting these is presented in Section 6.3.5. Examine closely the production of untargeted NDs and discuss their production and use.

3. Shadowing input. Inspect transcripts for lexical input from shadowed speakers in courses. Where there is such evidence, discuss production and use of input within narratives. This discussion is presented in Section 6.3.5.

4. Other FSs. Inspect sample files for evidence of more general use of formulaic language. A method for carrying out this procedure is described in Section 6.3.5. Discuss findings.

6.3.1 Hypothesis 3: Proceduralization of targeted NDs

Hypothesis 3: Targeted NDs will show evidence of proceduralization.

It has already been noted there are not yet established measures to validate proceduralization of discrete linguistic items. A number of measures are therefore employed in combination. Confirmation or rejection of this hypothesis entails an inspection of NDs used to confirm firstly that they are, in fact, produced as chunks and with ease and secondly, that the NDs

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[38] The sentence builders given treatment in Course 1 were not produced by any student post-test, possible reasons for this are discussed in Chapter 7.

can be seen to have a fluency function for the speaker. To confirm chunk production, articulatory production of NDs will be inspected and contextual analysis will be carried out to verify NDs are produced accurately and aptly. To establish fluency function, benefit in use for discourse management or as a communicative strategy will also be established by close contextual analysis.

To carry out preliminary selection of NDs for consideration, it is proposed that the NDs should be used at least five times in post-testing across courses. To confirm proceduralization of NDs, it is expected that NDs:

- are used for the most part in an appropriate, accurate manner with a distinct discourse function and,

- are articulated with a coherent intonation contour.

The latter feature, intonation contour, is examined next.

6.3.2 Targeted NDs: Intonation contour

It was noted in Chapter 2 that pause boundaries may serve as indicators of processing units. Many of the targeted NDs are multi-word units (MWUs). Most of these are two or three-word units, the two five-word units are frequently production through reduction as four-word units, and a number of the MWUs include an optional item *déarfainn fhéin/déarfainn,* 'I'd say myself/I'd say. In addition, the syllable count of a number of the MWU is often reduced in speech, *tá a fhios agat/tá 's a't,* 'you know'. If these MWUs are uttered as a single coherent item, we would not typically expect them to have an internal pause boundary. Inspection of transcripts for *Bladair* shows that all of the MWUs are produced within pause boundaries, both pretest and post-test, with just one exception. It is interesting to note the same ND uttered with an internal pause in that instance, *mar shampla,* 'for example', is uttered five times in total by that particular student and in each other instance without internal pausing. Apart from the absence of internal pausing in NDs which are MWUs, in attempting to ascertain the FS status of produced NDs it is also worth noting the frequency with which a speech run was comprised *solely* of either a ND or ND with hesitation marker. In such cases the ND, or ND with hesitation markers (*ems* or such), are bounded on either side by pauses. Examination of the runs comprised of ND with hesitation marker reveals that in almost all instances the ND in question functioned in marking a topic turn or closure, a narrative juncture not infrequently characterised with a hesitation marker. There were three instances of an Irish ND used with an English ND, e.g. *so sin é,* 'so that's it', again not an infrequent pattern of ND use in a second language. Volume 2 provides a full list of the speech runs presented in summary form in Table 6.2**.**

Table 6.2 NDs and speech runs

SPEECH RUNS COMPRISED IN WHOLE OF TARGETED ND Total instances ND Use = 211 Total no. of runs comprised in whole of NDs: 100. These runs as % of total ND use: 47%				
	ND alone	**ND with hesitation marker**	**ND with repetition or other ND**	**ND alone with false start**
Nos of runs & % of total DM use	48, (23%) 7 pretest 41 post-test	28, (13%) 3 pretest 25 post-test	21, (10%) 5 pretest 16 post-test	3, (1%) All post-test
Examples	*gan amhras* Garreth post 39 *chomh maith leis sin* PJ post 22	*eh n'fheadar cad eile* Andy post 5 *eh agus rud eile* Tadhg post 61	*sin é sin díreach é* Richard post 25 *agus sin é* Tadhg post 67 *sin é really* Fionn pre 16	*eh sin s_ sin é is dó_ dóigh* Seán post 55 *s_ sin é is dóigh* PJ post 5

While pause boundaries are important in indicating FS production, consideration was also given to quality of articulation. In all cases, audio was listened to carefully to ensure articulation was clear and clean, with no internal hesitations or slurring. Consideration was also given to prosodic contour, perhaps a more definitive aspect of articulatory production of FSs, as discussed in Chapter 3.

A total of 17 NDs were selected for examination of Hypothesis 3[39], a total of 149 instances of use in question. It was not feasible to carry out fine-grained prosodic examination on many instances and three NDs were chosen for prosodic examination in order to illustrate absence or presence of prosodic coherence., *ar dtús, cur i gcás* and *ar aon nós* (at first, for example, anyway).

Spectrogram for each phrase marks for pitch. As observed by Lin (2010) many researchers have noted 'distinctly fluent stretches of speech are found enclosed by pauses'. The examples below are all clearly bounded by pauses. These examples also show a phonological coherence as noted by Peters (1982) and cited in Lin (2010) formulaic utterances are 'always produced fluently with an unbroken intonation contour and no hesitations for encoding'. In these examples, I comment on the coherence of each contour by tracing the frequency of pitch as it moves through the utterance. Pitch movement is examined to establish if this movement supports the narrative function played by the ND within the student's discourse.

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[39] Selection of NDs described in Section 6.3.3.

Example 1: PJ *cuir i gcás* ʻfor example, considerʼ [kuɾ ɪ gɔːs]. Post 4
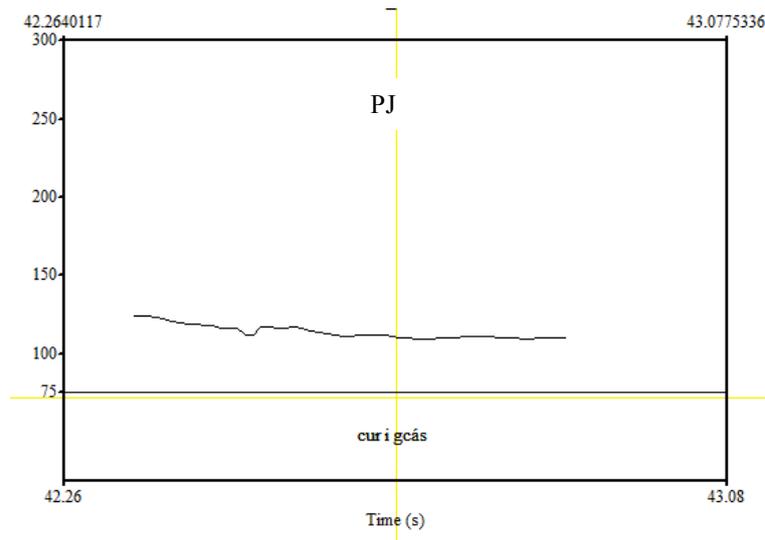
Figure 6.7 Intonation contour PJ 'Cuir i gcás

This ND is used is a discourse management feature that is used to mark or illustrate a point. The three syllables are realised in a coherent, continuous pitch contour without a voice break. The pitch onset is at 124.1 hz on the first vowel, /u/. The pitch then drops to111.5hz on the introduction of the front / ɪ / vowel. Rising to 117.3hz for the voiced /g/ consonant at the onset of the third syllable. The pitch then drops to 110hz on the / ɔː / vowel followed by an extended sibilant tail. This produces a level tone which suggests continuance, and is appropriate in the context of illustration.

Example 2: Andy: *ar dtús*, ʻat first, first of allʼ   [aɾ duːs]. Post 1
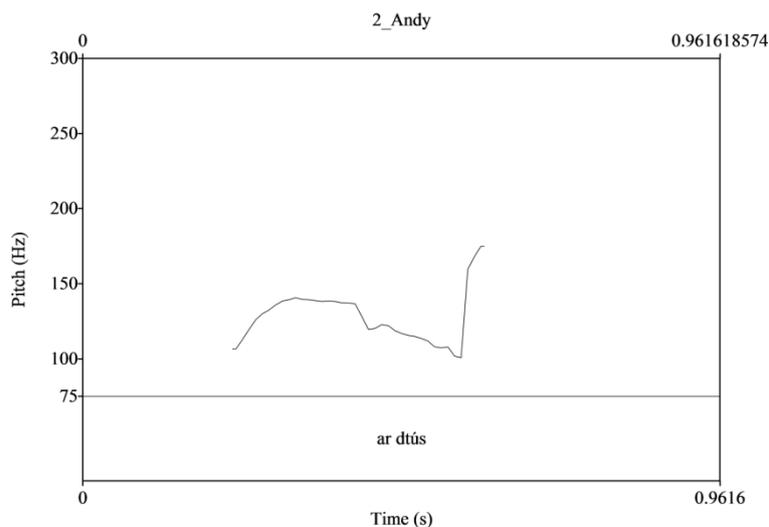
Figure 6.8 Intonation contour Andy *ar dtús*

The ND is uttered without a voice break producing with a continuous pitch contour. Beginning at 106.5hz on the front /a/ vowel the pitch rises to 140hz on the introduction of

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the /ɾ/ consonant and then drops as it merges with the voiced stop /d/. The contour ends rising from 101hz to 173.6hz on the long ʊː vowel suggesting, quite naturally at the start of the narration, that there is more to follow.

Example 3: Eoin , *ar aon nós* ‘anyway’ [aɾ æn nəʊs]. Post 6.
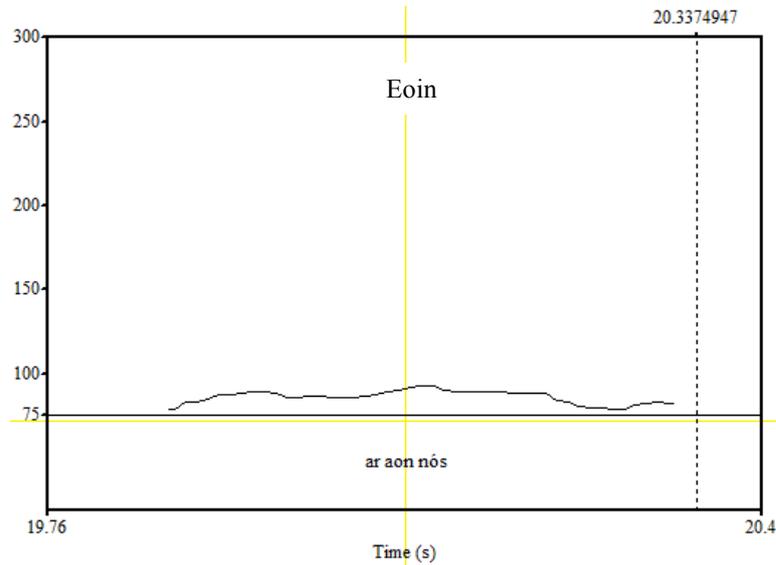
Figure 6.9 Intonation contour Eoin *ar aon nós*

This ND is a discourse management feature marking the end of a topic and a return to the general discourse. Here the three syllables of the phrase are realised in a continuous pitch contour. The pitch onset begins at 78.9hz rising to 88.7hz on the introduction of the /ɾ/ consonant. The pitch drops again to 85.2hz on the following vowel /æ/ , then rises again to 92.6hz for the first /n/ of a double nasal and the maximum pitch in the contour. The second /n/ is produced with a falling pitch, 88.4hz to 78.77hz. The minimum pitch 78.52hz occurs at the onset of /əʊ/phoneme. The pitch rises to 82.65hz during the articulation of the phoneme but drops again to 82.11hz by its completion. Overall the contour is falling which is appropriate to mark the end of the topic.

The aspects of articulatory production discussed, pausing and intonation, both support a claim that at least the majority of NDs produced in testing were articulated as proceduralized chunks. It remains then to examine the possible fluency function served by students' use of these targeted NDs. As indicated already, this will be done through functional and contextual analysis of NDs used.

6.3.3 Targeted NDs: Contextual analysis

Table 6.3 Targeted NDs use post-test

Course 1 & 2 Post-test Totals			
Sin é 'that's it'	21	Rud eile 'another thing'	6
Bhuel 'well'	15	Is dóigh liom 'I'd say, I think'	5
Mar shampla 'for example'	12	Ar aon nós 'anyway'	5
Ar ndóigh 'indeed, of course'	11	Ar dtús 'at first'	5
Sin díreach é, 'that's just it'	10	Tá a fhios agat féin 'you know yourself'	4
Go háirithe 'especially'	9	Gan amhras 'without doubt'	3
Cosúil le 'like'	9	Cuir i gcás 'consider'	3
Is dócha 'I suppose, probably'	8	Nach ea 'isn't that so'	2
Sea 'yes, that's so'	7	An bhfuil a fhios agat 'do you know'	2
B'fhéidir 'maybe'	7	Sin a bhfuil 'that's all'	1
Chomh maith leis sin 'as well as that'	7	Cinnte 'certainly'	1
N'fheadar cad eile 'I wonder what else'	6	D'fhéadfá a rá 'you could say'	1
Saghas 'kind of'	6	Seo mar atá sé 'that's how it is'	1

Out of 33 targeted NDs, a total of 26 were used at least once across courses. Table 6.3 details these NDs and number of times each was used post-test. Frequency of use numbers range from 21 to 1. Low usage of a ND may be taken to indicate either weak acquisition of the ND or its functional value not being well recognised, understood or valued. The bottom nine NDs in Table 6.3 were used once only by each of the individual students and therefore may be considered to have low functional value for these students or to have been acquired in an analytic manner, where retrieval takes effort (Wray 2002). It was decided to treat these as unproceduralized NDs and functional analysis is therefore carried out on the remaining 17. Of these, just three, *saghas,* 'kind of' *b'fhéidir* 'maybe' and *sin é* 'that's all' were used over five times pretest. NDs which had low usage or were not used at all will be discussed in Chapter 7. Significant differences in counts for particular NDs between Course 1 and 2 will be addressed in the current section. Quantitative and qualitative analysis is carried out on the 17 NDs, a total of 149 instances of use post-test. Analysis gives consideration to the following aspects:

Presented in tabular form:
-Counts by course, pretest and post-test
-Counts by student, pretest and post-test

Presented through corpus extracts (post-test only):
-Accuracy of production in form
-Fluency of production.
-Functional use
-Location within narrative

Targeted NDs are indicated through bold font in the transcripts in Volume 2. Corpus extracts discussed in this chapter are preceded by participant code name, indication if extract is from pretest or post-test and transcript line number, for example, Eoin Post 33. Individual speech runs are generally given separate lines but on occasions run breaks may be marked by a forward slash. Analysis commences with the most frequently used NDs.

The analysis begins by treating two NDs together as the two are very close in meaning. However *sin díreach é, '*that's just it' was not targeted on Course 1 so separate counts are given in Table 6.4. Participants' names in all tables are not given in a particular order.

Table 6.4 Counts for 'sin é' and 'sin díreach é'

	Sin é (is dóigh) that's it, that's all (I suppose)		*Sin díreach é* That's just it			
Course 1	Pre	Post	Pre	Post	Total	Change
Michael	1	1			2	0
Tadhg	1	1			2	0
Dan	1	1			2	0
Rian	0	1			1	+ 1
Cormac	0	1			1	+ 1
Jack	0	1			1	+ 1
Seán	0	1			1	+ 1
Course 2	Pre	Post	Pre	Post	Total	Change
PJ	1	2	0	2	5	+ 3
Garreth	1	1	0	0	2	0
Andy	1	0	0	0	1	-1
Niall	1	1	0	0	2	0
Richard	3	1	0	2	6	0
Fionn	2	3	0	0	5	+ 1
Eoin	0	2	0	1	3	+ 3
Cal	0	1	0	1	2	+ 2
Sam	0	1	0	1	2	+ 2
Ross	0	2	0	1	3	+ 3
Ciarán	0	0	0	1	1	+ 1
Colm	0	0	0	1	1	+ 1
Totals	**12**	**21**	**0**	**10**	**43**	**+ 19**

Examination of transcripts shows that *sin é (is dóigh)* and *sin díreach é* were both used exclusively for discourse management purposes. *Sin díreach é* can also have an interactional function, expressing strong agreement with a conversational partner. Given that testing did not involve a conversation, it is unsurprising that the ND was not used in this way. In all, then, a total of 43 instances of usage were analysed.

It should be noted firstly that two similar NDs, *sin a bhfuil* and *sin mar atá,* were also targeted on Course 1, each was used just once. As mentioned, *sin díreach é* was targeted on Course 2 only. There is very strong contrast with regard to counts for *sin é*. In all, 7 students from Course 1 used it, with no student using it more than once in a single test. In contrast, 9 of the students in Course 2 used the ND, 5 used it in both tests and 5 made multiple uses of it. It is interesting to note that the two students who make most use of *sin é* pretest, and used it fluently then both at narrative end and internally, show marginal improvement post-test. While Richard uses *sin é* less frequently in his post-test, he incorporates *sin díreach é* into his narrative, clearly grasping the close equivalence in function. When *sin díreach é* use is factored in, the contrast across courses already mentioned is even stronger. In fact the only student from Course 2 not to use *sin é* or *sin díreach é* to complete narrative post-test used *sin a bhfuil,* which was not targeted in Course 2. *Sin é* is directly equivalent to the English ND *that's it* and is the form most commonly used by students. *Sin é is dóigh, that's all I suppose,* was used 12 times, all post-test and ten of those times by Course 2 students. Apart from greater length, *Is dóigh* modifies *sin é*, making it less definite or personalising it slightly. Given the much higher usage of *sin é, is dóigh*, in Course 2 it is rather peculiar that *Is dóigh,* a targeted ND in its own right, was used by just one Course 2 student, twice pretest and once post-test. This may be reflect the more limited, less ambiguous functional role of *sin é, is dóigh* and its close correspondence to the equivalent English ND. It is also possible that *sin é, is dóigh* was acquired as a kind of fused chunk, resistant to division.

Confirming students' clear grasp of function of these NDs, across courses there was strong usage of both NDs for discourse management. In fact, in all instances the NDs were used either to complete narratives (27 of the 43 instances) or to mark a topic turn (16 instances). Production was in general accurate and articulation clear, with just two false starts noted. Hesitation phenomena, fillers such as *em, eh,* were present in the immediate environment a total of 20 times, almost half of the total instances. It would be unsurprising for a decision to change topic or complete a narrative not to be accompanied with a degree of uncertainty and fillers frequently in such contexts (Corley & Stewart 2008).

It is striking that of the 21 instances in all tests of ND used directly with another ND, 16 relate to narrative opening, closure or topic turn and *sin é* features among this group 13 times. Using another ND with a topic turn or topic completion ND is also not surprising. It might serve, for instance, to soften what otherwise might be an abrupt discourse move. There were six instances of English NDs (*yeah, so, really)* being used with *sin é*, in fact these are the only times when English NDs are used paired with an Irish ND. This bilingual pairing is another confirmation of the functional equivalence between *sin é* and *that's all*, mirroring for example *yeah that's all.* Typically, *sin é* is used with conjunctions *agus* 'and' (n=16), *ach eh agus* 'but eh and' (1) and *agus, sin é is dóigh, ach* 'and, that's it I suppose, but' (n=1), again a pattern not unlike English usage.

Possible reasons for the greater gains in usage of *sin é,* and various other NDs in Course 2, will be discussed below. Finally, however, an instance of one student's use of both *sin é* and *sin é go díreach* is briefly presented. Both are here used to complete the narrative, accomplished in three turns.

Eoin Post 33   *ceapaim eh ceapaim go bhfuil Fraincis*
Eoin Post 34   *an teanga níos measa dom* (4.16)
Eoin Post 35   *agus sin é go díreach* (2.12)
Eoin Post 36   *ní cheapaim go bhfuil aon rud eile eh xxx caint faoi* (1.79)
Eoin Post 37   *agus sin é*

Eoin Post 33   I think eh I think French is
Eoin Post 34   the worse language for me (4.16)
Eoin Post 35   and that's just it (2.12)
Eoin Post 36   I don't think there is anything else eh xxx [to] talk about (1.79)
Eoin Post 37   and that's it

(nos in brackets = pause duration in seconds)

Pausing data supports Eoin's use of *sin é* as a fluency device, supporting the speaker in a difficult passage. Line 33 contains repetition and a hesitation filler, possibly signalling some cognitive pressure, indeed perhaps indicating an awareness by Eoin of the syntactic challenge ahead[40]. The pause after completion of the clause, with grammatical errors, is considerably longer than Eoin's average post-test post of 1.57. Line 35 is delivered clearly, competently and in an appropriate manner. In fact Eoin uses an alternate form to *sin díreach é*, the only student to do so. *Sin é go díreach*, with the full adverb phrase moved to the end,

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[40] Unlike English, Irish has distinct substantive verb forms of the verb, 'be': *bí* and *is*. Within Irish grammar, *is* is termed 'the copula'. It is more restricted than other verbs, and has very different inflection patters. Apart from frequently used fixed phrases in syntactically simple sentences, *is maith liom spórt,* 'I like sport', the copular form is challenging for many students. The most common problem is where students use the verb *bí* when the copula is required, the problem is particularly evident in indirect speech.

may be seen to be stronger, more definite. Eoin's difficulty in expressing 'I don't think there's anything else to say' in Line 36 is evident with errors with syntactic construction, hesitation and unclear articulation. An 'island of reliability' is again available, prompted perhaps by use in Line35, and narrative completion is successfully signalled.

A number of the targeted DMs have more general roles in discourse and usage may reflect a number of factors. However, in addition to *sin é*, there are six other targeted DMs with relatively specific discourse management function and these will now be examined.

Mar shampla, go háirithe and *cosúil le,* 'for example, especially, like*',* all help to give topic focus. *Mar shampla* and *cosúil le* typically signal illustration of some general kind and *go háirithe* indicates a more pertinent or specific example. Firstly, use of *mar shampla* is considered with counts shown in Table 6.5.

Table 6.5 Counts for 'mar shampla'

Mar shampla, 'for example'				
Course 1	Pre	Post	Total	Change
Liam	0	1	1	+1
Eamon	0	1	1	+1
Gavin	0	1	1	+1
David	0	2	2	+2
Seán	0	1	1	+1
Course 2	Pre	Post	Total	Change
Ross	2	3	5	+1
Andy	0	1	1	+1
Richard	0	2	2	+2
Eoin	0	1	1	+1
Totals	**2**	**13**	**15**	**+11**

Usage of *mar shampla* by students conforms to its typical function of illustrating a general point with a specific example: the European Union and France, enjoyment of watching sports and a particular game seen, an interesting subject and a topic within it. There is one instance worth giving in full.

David Post 48-51 *tá a lán eh ábhar á em á dhéanamh againn eh mar shampla or xxx*
              cuir i gcás
David Post 48-51 we do a lot of subjects, for example or xxx take for example

Cuir i gcás means *consider, take for example*. *Mar shampla* is probably the form students are more familiar with, and is closer in form to the English DM. In total *cuir i gcás* was just used three times across courses. David demonstrates good grammatical competence in this turn and appears to be making a conscious effort to extend his vocabulary, clearly indicating a choice by uttering *or*. A final point on *mar shampla,* it is curious that, while a number of students across courses were comfortable in their use of the ND post-test, only one used it pretest.

Table 6.6 Counts for 'go háirithe'

Go háirithe, 'especially, in particular'				
Course 1	Pre	Post	Total	Change
John	0	2	2	+2
Rian	0	1	1	+1
Rory	0	2	2	+2
Cillian	0	1	1	+1
Course 2	Pre	Post	Total	Change
Cal	1	1	2	0
Niall	1	1	2	0
Sam	0	1	1	+1
Totals	**2**	**9**	**11**	**+7**

Usage of *go háirithe*, detailed in Table 6.6, follows the same discourse pattern as for *mar shampla,* a more general point elaborated on with a specific focus: the importance of sport for people *and* its importance for young people, the enjoyment of playing a sport *and* of playing it during the summer:

Rory Post 6-8   *is aoibhinn liom ag imirt é /eh go háirithe ag imirt é sa samhradh le mo chairde*
Rory Post 6-8   I love playing it/eh especially playing it in the summer with my friends

While both NDs are articulated clearly and cleanly, they are both accompanied more typically with hesitation markers than without, either before or after the ND. In addition *mar shampla* is repeated consecutively in a run (Ross post 35) and another student makes a false start with the ND, *uh mar mar shampla* (David post 38). This may indicate a natural degree of cognitive pressure in selecting or rehearsing an appropriate example.

Table 6.7 Counts for 'cosúil le'

Cosúil le, 'like'				
Course 1	Pre	Post	Total	Change
John	0	2	2	+2
Rian	0	1	1	+1
David	0	2	2	+2
Course 2	Pre	Post	Total	Change
Cal	0	1	1	+1
Garreth	0	2	2	+2
Sam	0	1	1	+1
Totals	**0**	**9**	**9**	+9

The frequency of use post-test of *cosúil le* (like, similar to), as detailed in Table 6.7, may appear strong considering the ND was not used at all in pretests. However, on three occasions it was repeated in a speech run. In one instance it appears the student is trying to think of an appropriate illustration:

Seán Post 16 *tá sé cosúil le, cosúil le deartháir inniu*
Seán Post 16 it's like, like a brother today

In the other case, the student seems to be correcting prepositional use:

David Post 9 *cosúil leis eh cosúil le inniu*

David Post 6 like eh like today

These lines neatly demonstrate the difference between repeating a chunk to buy planning time, or to help prompt the apt description; and repeating a linguistic form to ensure grammatical correctness, *cosúil leis eh cosúil le*.

Both instances also illustrate that *cosúil le* can mean *like* as in *such as* or, alternatively, be used to denote a simile. Apart from the example just seen with Seán, one other student used *cosúil le* to express a simile, elsewhere it was used to mean *such as. Mar shampla,* similar to *for example,* is generally followed by an open set of items; *such as* implies a common denominator. The difference is subtle but may in part account for the much greater use made by students of *mar shampla,* they may have felt more secure in the meaning expressed by it.

Table 6.8 Counts for 'chomh maith leis sin'

Chomh maith leis sin, 'as well as that'				
Course 1	Pre	Post	Total	Change
Seán	0	1	1	+1
Dan	0	1	1	+1
Course 2	Pre	Post	Total	Change
PJ	0	1	1	+1
Cal	0	1	1	+1
Colm	0	1	1	+1
Fionn	0	1	1	+1
Garreth	0	1	1	+1
Totals	**0**	**7**	**7**	**+7**

As shown in Table 6.8, *chomh maith leis sin* is another ND not used at all pretest. While only used once by each student post-test, the numbers of students to adopt it from Course 2 is relatively high**.** In all instances it was uttered clearly and cleanly, and in five of the seven instances the ND alone comprises the speech run. This alone may indicate a high awareness of the phrase's discourse function. The students used the ND purposefully; to elaborate on a point, to add another item to something or to manage a topic turn.

Dan Post 19-20	*bhíomar ag imirt gailf agus chomh maith leis sin chuaigh mé ag seoltóireacht*
Dan Post 19-20	we were playing golf and as well as that I went sailing
Fionn Post 16-17	(after talking about Irish as school subject and language)
	táim brú- bródúil as eh chomh maith leis sin is é an Staidéar Gnó
Fionn Post 16-17	I'm pr- proud of it eh as well as that Business Studies is

Table 6.9 Counts for 'agus rud eile'

(Agus) rud eile, '(And) another thing'				
Course 1	Pre	Post	Total	Change
SOC	0	1	1	+1
Liam	0	1	1	+1
Cormac	0	2	2	+2
David	0	1	1	+1
Rory	0	1	1	+1
Course 2	Pre	Post	Total	Change
Eoin	1	0	1	-1
Cal	0	1	1	+1
Totals	**1**	**7**	**8**	**+6**

(Agus) rud eile counts are presented in Table 6.9. This ND can be used in discourse management in a manner very similar to *chomh maith leis sin.* We have seen that frequency counts for *chomh maith leis sin* were not particularly high, though the ND was used effectively, and a possible reason for the low count is that students opted for one over the other. It transpires, in fact, that Cal is the only student to use both NDs. Eoin is the only student to have used the ND pretest, and he did not use it post-test.

(Agus) rud eile is produced clearly and cleanly by all students, and uttered with pause boundaries either side in five cases. However, it is subject to more repetition and hesitation phenomena than *chomh maith leis sin*:

Tadhg   Post 61   *eh agus agus rud eile* 'eh and and another thing'

Liam   Post 16   *agus eh agus rud eile agus eh* 'and eh and another thing'

Cormac Post 18   *eh agus rud eile em eh* 'eh and another thing em eh'

Cormac Post 34   *eh agus rud eile eh* 'eh and another thing eh'

David   Post 28   *is é an rud rud eile ná eh* 'the other thing is eh'

Rory   Post 37   *eh na rudaí eile a* 'eh the other things that'

As the ND is used to introduce some kind of elaboration, the hesitation phenomena are likely due to the planning pressure with a discourse management task, as noted with *go háirithe* and *mar shampla.* It is interesting that there is much less evidence of hesitation, and no instance of repetition, with *chomh maith leis sin.* This may be due to the much higher general frequency of *agus,* 'and', often with accompanying hesitation phenomena.

Discourse management use of *rud eile* by students is, as suggested above, similar to that of *chomh maith leis sin.* Students employed the ND to elaborate on a topic or establish a connection with a topic turn.

Tadhg   Post 59   *agus eh*
Tadhg   Post 60   *sin ceapaim*
Tadhg   Post 61   *eh agus, agus rud eile*
Tadhg   Post 62   *ceapaim gur*
Tadhg   Post 63-66   (makes general point about topic)
Tadhg   Post 67   *agus sin é*

Tadhg   Post 59   and eh
Tadhg   Post 60   that's I think
Tadhg   Post 61   eh and, and another think
Tadhg   Post 62   I think that
Tadhg   Post 63-66   (makes general point about topic)
Tadhg   Post 67   and that's it

Line 67 marks the end of Tadhg's narrative. It appears in Line 60 he is winding up the narrative, thinks of a concluding point he wishes to make, skilfully uses the ND to incorporate it and then concludes.

This ND has variations in form, and this potential is exploited by two students. One student uses the plural form (Rory Post 37) and one uses the negative form (Eoin Post 28) to bring his narrative to a close, *níl aon rud eile i ndáiríre,* 'there's nothing else really'. The form is on most occasions used as a tag at the start of a main clause such as *agus rud eile eh téann mise* 'and another thing eh I go' (Cormac Post 35) but there is an alternative to this pattern which is employed by two students. Both have good competence in Irish, and their skilful use, both linguistic and discoursal, of the ND is detailed in Section 6.5, as part of a discussion on competence levels and ND use.

Table 6.10 Counts for 'ar dtús'

Ar dtús, 'at first'				
Course 1	Pre	Post	Total	Change
/	0	0	0	0
Course 2	Pre	Post	Total	Change
PJ	0	1	1	+1
Andy	0	1	1	+1
Sam	0	1	1	+1
Niall	0	1	1	+1
Fionn	0	1	1	+1
Totals	**0**	**5**	**+5**	**+5**

The final ND to be considered with relatively straightforward discourse management function is *ar dtús,* Table 6.10 details counts for use. This ND was not targeted in Course 1 and all instances of use come from Course 2, all post-test instances. The more restricted nature of ND function is clearly illustrated by examining the location of the ND in narratives – in all cases it is used in Line 1 and in all cases bar one forms the opening phrase. Production was clean and clear and the ND was used by students in all instances to launch directly into their narrative:

PJ	Post 1	*ar dtús is iad na cairde*
Andy	Post 1	*ar dtús – is ainm dom*
Fionn	Post 1	*bhuel ar dtús táim ag déanamh*

PJ	Post 1	at first, the friends [who] are
Andy	Post 1	at first – is my name
Fionn	Post 1	well at first I'm doing

It has been noted that the NDs examined to this point have clear discourse management functions: managing narrative opening and closure, negotiating topic turn, focus, elaboration and illustration. Close inspection of transcripts and audio indicate that in almost all instances students use these NDs deftly, appropriately and in a manner that indicates their production as a chunk. These NDs, then, were clearly an aid to students in constructing and controlling their narratives, and contributed to a fluent delivery. However, the function of many of the other targeted NDs is not quite as restricted or transparent as some of those just explored. Indeed the function of some NDs, yet to be discussed, is precisely to express a degree of uncertainty or ambiguity. On the other hand, some of the targeted NDs derive their full semantic import from contextual use. Such NDs may, therefore, present very different challenges to students. The next four NDs to be examined, for example, indicate stance and express varying degrees of assertion or evaluation on the speaker's part.

Table 6.11 Counts for 'ar ndóigh'

Ar ndóigh, 'indeed, of course'				
Course 1	Pre	Post	Total	Change
Rian	0	1	1	+1
Course 2	Pre	Post	Total	Change
PJ	0	1	1	+1
Cal	0	1	1	+1
Andy	0	1	1	+1
Garreth	0	1	1	+1
Liam	0	1	1	+1
Ciarán	0	1	1	+1
Ross	0	1	1	+1
Eoin	0	1	1	+1
Colm	0	1	1	+1
Fionn	0	1	1	+1
Totals	**0**	**11**	**11**	**+11**

Ar ndóigh, detailed in Table 6.11, typically asserts the accompanying statement is obvious, a given fact, something we all know. In seven cases here, it is clearly used with that purpose. These instances are particularly unusual in that the narrative context is the same in all. The students are talking about their school subjects and list them. In all cases, the students commence their list with the phrase *Gaeilge ar ndóigh* 'Irish of course'. This use is not an astonishing coincidence of ironic use. It is, in fact, an interesting instruction effect. Each of

these students had at some stage in the course shadowed a speaker talking about subjects he was taking for the Leaving Certificate, who commenced his list with that very phrase. Not only was the usefulness of *ar ndóigh* in listing items appreciated, it has become as it were welded to a particular item. In three of the seven instances, *Gaeilge ar ndóigh* is produced as a complete speech run. *Ar ndóigh* is used four times as a connector between old and new information. PJ talks first about friends at home and goes on to describe the effect of being at school on friendship. Rian states he likes the subjects he is taking but considers all subjects have advantages and disadvantages, and Sam says he had to take many subjects for the Junior Cert exam but is taking less for the Leaving Cert. Sam's use of *ar ndóigh* conveys the meaning of 'it's a given fact' but in the previous two examples *ar ndóigh* functions to qualify the initial assertions made by the speakers. In the final instance to be considered, *ar ndóigh* opens the narrative:

Colm   Post 1   *eh ar ndóigh is aoibhinn liom spórt.*
Colm   Post 1   eh of course I love sport

Colm proceeds to talk about the various sports he plays. *Ar ndóigh* is used by him as a connector between his general love of sport and his involvement in particular sports. *Ar ndóigh* does more than neutrally state cause and effect, the speaker's stance is made clear. It is interesting to note that, unlike the other examples just discussed, the phrasal link is not used internally, between the two items of information but is given a dominant position at narrative beginning. Functioning perhaps in a way similar to *ar dtús,* 'at first', it may be seen to ease the speaker into the narrative and propels the narrative forward.

Though *ar ndóigh* is used appropriately and produced clearly in all cases, it is only used once by each student. It is safe to surmise the phrase *Gaeilge ar ndóigh* has been acquired as a MWU of three words by the seven students in question, and that these students did not adopt *ar ndóigh* as an independent phrase. Colm, as mentioned, may have used the phrase in part with the equivalent function of *ar dtús* and hence used it adeptly at narrative commencement only. The ND can be incorporated at any stage of a narrative, the low frequency of usage of this and other NDs by students will be discussed further in Section 7.4.2.

Examination of students' use of *ar ndóigh* indicates something of the suggestive potential of some NDs. That potential, and the critical role of intonation and contextualised use in giving precise expression to a ND, is even more evident in a consideration of the next three NDs which all, to varying degrees may function as hedges or vagueness tags.

Table 6.12 Counts for 'is/ní dóigh liom'

Is/ní dóigh (liom) 'I'd say, think, reckon, suppose'				
Course 1	Pre	Post	Total	Change
MB	1	1	2	0
Liam	0	1	1	+1
OC	0	1	1	+1
David	0	1	1	+1
Course 2	Pre	Post	Total	Change
Niall	2	1	3	-1
Totals	**3**	**5**	**8**	**+2**

Table 6.12 presents *Is dóigh liom.* This ND can be used to express opinion assertively or tentatively, intonation conveys the speaker's stance clearly pretty much as stress might in English. In six of the eight instances of use, *is dóigh liom* is used to state a strong personal opinion:

Niall	Post 2	*is dóigh liom go bhfuil spórt tábhachtach*
Conor	Post 58-61	*is dóigh liom gur bhfuil sé an xxx an imreoir is fearr don a lán daoine*
David	Post 40-41	*is dóigh liom go bhfuil na scoile eh in Éirinn eh níos fearr*

Niall	Post 2	I think sport is important
Conor	Post 58-61	I'd say that he is xxx the favourite player of a lot of people
David	Post 40-41	I reckon school in Ireland is eh better

The strength of Niall's conviction is made even more evident when he continues:

Niall	Post 4	*eh go háirithe do daoine óga*
Niall	Post 4	eh especially for young people

Conor is less sure of an event occurring and uses the negative form of the ND, the only student to do so:

Conor	Pre 31	*ach ní dóigh liom go raibh go raibh sé eh*
Conor	Pre 31	but I don't think it, it was eh

Finally, one student uses the ND to open his narrative, and conveys the sense of 'having considered the matter', modifying what might otherwise have been an abrupt opening.

Liam	Post 1-2	*is dóigh eh is fearr liom eh rugbaí*
Liam	Post 1-2	I suppose eh I like rugby best

The ND is produced clearly by all students, and accompanying hesitation markers are no more than one might expect with a phrase preceding a propositional remark. Syntactic errors are made in the use of this propositional phrase, however. These relate to a difficulty

discussed earlier, with indirect speech. The ND is not used as frequently as one might expect, given its high functional value and a possible reason for this may be the favoured use of *ceapaim, I think,* among some students. *Ceapaim* is used 59 times pretest and post-test across courses, it is more familiar to many students and for some *is dóigh liom* may have been competing for a lexical slot already occupied instead of being lexicalised as an autonomous item. The low gain in usage by students is evidence that this ND has not been proceduralized as a result of *Bladair.*

Table 6.13 Counts for 'is dócha'

Is dócha, 'I suppose, probably'				
Course 1	Pre	Post	Total	Change
Gavin	0	1	1	+1
Tadhg	0	2	2	+2
Liam	0	1	1	+1
Cormac	0	1	1	+1
John	0	1	1	+1
Dan	0	1	1	+1
Rory	0	1	1	+1
Course 2	Pre	Post	Total	Change
Ross	0	1	1	+1
Totals	**0**	**9**	**9**	+9

Is dócha, detailed in Table 6.13, also carries a subtle expression of assertion, again its precise meaning depends on contextualised use and intonation. In four of the nine instances, *is dócha* precedes a statement employing a superlative: the best holiday (n=2), a favourite sport, and the best people. *Is dócha* appears to function in these cases to modify these strong assertions, and again to convey a sense of 'having considered the matter'. One student uses the ND twice to convey factual uncertainty, in the example below he confirms this uncertainty with the use of *ceapaim, I think.*

Tadhg   Post 1-4   *nuair a bhí mé óg is dócha bhí bhí mé ag imirt iománaíocht ceapaim an t-am ar fad*
Tadhg   Post 1.4   when I was young, I suppose, I was playing hurley I think all the time

Apart from indicating one is engaging with some seriousness with the topic, the ND also functions as a filler, giving the speaker planning time. One student manages to use the ND to extend a run where he speaks on languages:

Ross   Post 42-47   *is maith liom na teangacha mar tá sé ana-suimiúil, is dócha go bhfuil an Ghaeilge suimiúil ach tá me, níl mé uh eh go hiontach chomh maith le an Fhraincis*

Ross   Post 42-47   I like the languages because [it] is very interesting. I suppose Irish is
                        interesting but I'm, I'm not eh great as good as French

Ross talks about languages in general and why he likes them. He makes a specific reference to Irish, granting (to more expert judgment, perhaps) with the use of *is dócha* that Irish probably shares that positive quality too, and then turns the narrative back to himself, blaming his poor competence in the language. Deft use of *is dócha* and *ach* 'but' give coherence to this fluent passage.

Increased usage, and the manner of use by students, suggests this ND has been proceduralized for students. These gains are made almost exclusively by Course 1 students, which may be an effect from shadowing input on that course; shadowing input is discussed in Section 6.6. There are similar syntactic errors made in conjunction with this ND as we saw with *is dóigh liom* 'I think'. Use by some students of this particular DM reveals much of their competence level and gives an opportunity for higher ability students to express themselves with a degree of stylistic nuance. RQ 4 is concerned precisely with competences levels and ND use and presents an indepth analysis of relevant examples.

Table 6.14 Counts for 'b'fhéidir'

B'fhéidir, 'maybe'				
Course 1	Pre	Post	Total	Change
Michael	3	2	5	-1
Jack	2	2	4	0
Tadhg	0	1	1	+1
Eamon	0	1	1	+1
Course 2	Pre	Post	Total	Change
Ross	1	0	1	-1
Ciarán	0	1	1	+1
Totals	**6**	**7**	**13**	**+1**

B'fhéidir is detailed in Table 6.14. 'Maybe' is frequently used in English, apart from denoting uncertainty it is also used to hedge or soften a response. Students in all instances used it to express uncertainty or possibility. When followed by a verb phrase the ND again posed problems for lower ability students, as noted in the discussion of *is dóigh liom,'* I think'. This ND showed the most marginal of improvements post-test, indicating it had not been proceduralized as a result of the course and it did not have an impact on fluency gains.

Table 6.15 Counts for 'bhuel'

Bhuel, 'well'				
Course 1	Pre	Post	Total	Change
John	2	0	2	-2
Rian	0	1	1	+1
Eamon	0	1	1	+1
Gavin	0	1	1	+1
Jack	0	2	2	+2
Conor	0	2	2	+2
Liam	0	1	1	+1
Course 2	Pre	Post	Total	Change
PJ	1	0	1	-1
Cal	0	1	1	+1
Sam	0	1	1	+1
Ciarán	0	1	1	+1
Niall	0	1	1	+1
Ross	0	1	1	+1
Eoin	0	1	1	+1
Fionn	0	1	1	+1
Totals	**3**	**15**	**18**	**+12**

In contrast to *b'fhéidir,* the ND *bhuel* shows strong gains across both courses, as shown in Table 6.15. Pronunciation is generally similar to the English *well,* but the word in Irish is, in general, only used as a DM[41], and in ways similar to the English DM.

Bhuel is used six times at the beginning of students' narratives:

John	Pre 1	*bhuel is breá liom é*
Rian	Post 1	*bhuel sa scoil seo*
Cal	Post 1	*bhuel eh déanann mé*
Ciarán	Post 1	*bhuel déanaim seacht n-ábhar*
Ross	Post 1	*bhuel ar ndóigh tá mé ag déanamh*
Fionn	Post 1	*bhuel ar dtús táim ag déanamh*

John	Pre 1	well I love it
Rian	Post 1	well in this school
Cal	Post 1	well I do
Ciarán	Post 1	well I'm doing seven subjects
Ross	Post 1	well, of course, I'm doing
Fionn	Post 1	well, firstly, I'm doing

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[41] One may well hear *an bhfuil tú all right?* 'are you alright?' uttered by a NS but it would be quite unusual to hear *an bhfuil tú well?,* 'are you well?'

For the speaker, the use of this filler at the start of a narrative can serve a number of functions. It may signal to the listener that you are ready to start, have taken the floor. It can also indicate that you are giving consideration to the topic. At the same time, it gives the speaker planning time at an important point in the narrative. It is of interest, indeed, that Ross and Fionn employ two NDs in tandem. John goes on to play the part of interlocutor, posing a question to himself and prefacing his answer with *bhuel* in a manner which again implies having given thought to the question:

John   Post 4   *Cén fáth? Bhuel tá sé an, mo, mo náisiún*
John   Post 4   Why? Well it's the, my, my nation

Liam, we saw earlier, started his narrative somewhat tentatively, using *is dóigh*. He then makes a second start, with *bhuel*

Liam   Post 1-3   *Is dóigh eh is fear liom eh rugbaí.*
Liam   Post 4   *Ah bhuel, is é rugbaí an spórt is fearr liom*

Liam   Post 1-3   I suppose eh I like rugby best
Liam   Post 4   Ah well, rugby is the sport I like best

Niall, on the other hand, uses *bhuel* to signal he is winding his narrative up:

Niall: Post 45-47   *tá na cúrsa ana-deacair*
Niall   Post 48   *bhuel eh*
Niall   Post 49   *tá*
Niall   Post 50   *eh sin é is dóigh*

Niall   Post 45-47   the [courses] are very hard
Niall   Post 48   well eh
Niall   Post 49   [there] is
Niall   Post 50   eh that's it I suppose

In all other cases, bar one, *bhuel* is used to signal a topic shift: from Stephen Gerrard to training, from talking about one subject to talking about another and the like. Sam uses *bhuel* to extricate himself from a situation. He has been talking about how he finds Maths and Physics easy, unlike English and Irish:

Sam   Post 25-26   *cosúil le Gaeilge nó Béarla*
Sam   Post 27   *níl mé*
Sam   Post 28   *bhuel*
Sam   Post 29-30   *is aoibhinn liom na huimhreacha*

Sam   Post 25-26   like Irish or English
Sam   Post 27   I'm not
Sam   Post 28   well
Sam   Post 29-30   I love figures

Bhuel seems to signal 'you get my gist, I don't need to go there' and allows Sam to continue the narrative smoothly. It is clear from an examination that students have used *bhuel*

effectively and incorporated it smoothly into their narratives. This ease of lexical retrieval at an apt and appropriate time within the narrative delivery, along with the significant increase in use, strongly indicates a proceduralization of the ND.

Table 6.16 Counts for 'ó sea'

(Ó) sea, '(oh) yes'				
Course 1	Pre	Post	Total	Change
Seán	1	1	2	0
Dan	0	3	3	+3
John	0	1	1	+1
Rian	0	1	1	+1
Rory	0	1	1	+1
Course 2	Pre	Post	Total	Change
	0	0	0	0
Totals	**1**	**7**	**8**	**+6**

Table 6.16 shows counts for *sea. Sea* was used by Course 1 students only, and by most of those students just once. *Sea* is another filler, used frequently at hesitation points, e.g. Dan Post 37-39 *em agus sea sin sin an na…* Apart from signalling to a listener that the speaker is still engaged in delivery, *sea* can function to help the speaker structure the narrative. The instances of use by students show very effective use of *sea* for this purpose.

Seán is talking about sport. He has just described attending a game.

Seán   Pre 33   *ag féachaint an an cluiche*
Seán   Pre 34   *sea agus eh ag*
Seán   Pre 35   *<d'imigh> mé rugbaí*

Seán   Pre 33   looking at the game
Seán   Pre 34   yeah, and eh -
Seán   Pre 35   I [played] rugby

Sea signals Seán is running out of steam on this topic. This is likely an unanticipated conclusion for him, *agus eh ag* 'and eh' suggests he had not something readily available to talk about. In line 35 he proceeds to talk about a new topic. He does so somewhat awkwardly, he has not established a transition and the use of *d'imigh,* 'left', instead of *d'imir,* 'played', suggest some pressure. Nevertheless he does succeed in managing an unplanned transition, and *sea* might be considered the most effective element in that process.

Dan provides a clearer example again of *sea* being used to facilitate clear structuring of discourse. He is talking about an enjoyable holiday and an event he enjoyed. The slash mark indicates a pause boundary.

Dan Post36-44 *an-ghreannmhar xxx domsa/ em agus/sea sin/ an na laethanta saoire is fearr a bhí agam/ceapaim/eh i mo shaol riamh/i mbliana/sea/ agus beidh mé…*

Dan Post36-44 very funny xxx for me/em and/yeah that's/the best holiday I had/I think/eh in my life ever/this year/yes/and I'll be…

Sea is uttered twice in this brief passage, at Lines 38 and 43. Dan's narrative in this passage is at a point of transition. He manages this in a few moves and uses the ND to mark a conclusion firstly, to an event description and secondly, to frame a more general conclusion on the topic.

1. He describes a humorous incident which happened, referring to himself at the end.

2. He hesitates slightly and utters *sea.*

3. He makes a general statement about the holiday, using a superlative.

4. He utters *sea.*

5. He begins a new turn, using a conjunction, and refers to the future.

Other students make similar use of *sea* to assist in managing topic turns, potentially challenging points for students in maintaining control over discourse structure. Two students (Dan and Rory) use *sea* to bring their narrative to a conclusion. A more unusual use of *sea* is evident in John's narration. He is talking about friendship, and at this point is comparing his friends at school with his friends at home. He runs into some difficulty trying to find the correct comparative form.

John   Post 51 *tá na cairde*
John   Post 51 *anseo*
John   Post 51 *níos dílis*
John   Post 51 *níos cinél n_ níos*
John   Post 51 *níos*
John   Post 51 *cineáirde sea*
John   Post 51 *agus*

John   Post 51 friends
John   Post 51 here [are]
John   Post 51 more loyal
John   Post 51 more k- m- more
John   Post 51 more
John   Post 51 [kind?] yes
John   Post 51 and

On the third attempt at searching for an item a speaker might well become despondent. John settles on an expression, Post 51, and almost declaims it with *sea.* Interestingly, the expression decided on is a coinage, possibly of *cairde* (friends) and the word John may have been searching for, *cineálta* (kind). A coinage worth of declamation, indeed!

In conclusion, while *sea* is not used with frequency across courses, it is always used in a very effective way at important junctures, clearly facilitating fluent delivery of narratives.

Table 6.17 Counts for 'saghas'

Saghas, 'kind of, sort of'				
Course 1	Pre	Post	Total	Change
*John	6	0	6	-6
David	1	0	1	-1
Rory	1	2	3	+1
Cillian	2	3	1	0
Course 2	Pre	Post	Total	Change
PJ	1	0	1	-1
Ross	0	1	1	+1
Niall	0	1	1	+1
Totals	**11**	**7**	**18**	**-4**
excl John	**5**	**7**	**12**	**+2**

Saghas, detailed in Table 6.17, functions as a hedge, it modifies but does so through suggesting vagueness, uncertainty or indeterminacy. Of all the NDs used, *saghas,* is the only one to show negative results post-test. In fact counts for both usage and overall change are distorted somewhat by one student, as is show by Table 6.17**.** John uses the ND six times pretest and not at all post-test. When John's use of *saghas* is first examined, it is clear *saghas* is used with quite different meanings. John is talking about Ireland. Run breaks are indicated by a forward slash.

John Pre 16-17	*tá sé/do do náisiún saghas*
John Pre 23-24	*tá Éire saghas/lán le*
John Pre 28-30	*em a lán daoine ag saghas/ag saghas/m_ múineadh tusa*
John Pre 33-35	*tá sé lán le spórt/saghas/an GAA*
John Pre 39	*gach saghas duais*

John Pre 16-17	it's/your your nation sort of
John Pre 23-24	Ireland is kind of/full of
John Pre 28-30	em a lot of people kind of/kind of/t- teaching you
John Pre 33-35	it's full of sport/[such as]/the GAA
John Pre 39	every kind of advantage

Line 39 is delivered when John is drawing his narrative to a conclusion, he makes a strong general statement about the country, and the use of *gach,* 'every' means *saghas* no longer functions just as vague language but rather conveys a sense of emphasis, 'you have *every* advantage, I don't need to list them all'. In Lines 33-35 John seems to be using *saghas* with the meaning of *such as*, a meaning it does not actually have. In the other examples *saghas* is clearly used to express vagueness but is not used very successfully, apart from Line 17. It seems contradictory to say a place is *kind of full* of purpose, and in Lines 28-30 *saghas* splits a verbal noun phrase, a marked and grammatically inaccurate usage. The fact that John doesn't use *saghas* at all post-test, despite frequent and somewhat idiosyncratic use of it pretest, is interesting but difficult to interpret and it is not possible to comment further.

Other students' use of *saghas* is more successful, *saghas leadránach,* 'kind of boring' (David Pre 11), *saghas sceitimíneach,* 'kind of exciting' (Cillian Pre 36). In these instances *saghas* purposefully and clearly modifies attributes. However, there are still inaccuracies in use.

Rory Pre 5-6   *tá siad difriúil xxx/saghasanna,* 'they are different xxx kinds'
The plural form indicates *saghas* may be used as a noun but if so Rory is using the incorrect substantive verb.

Cillian Post 45   *nuair a cheapaim faoi na tire eile saghas Gearmáin*
Cillian Post 45   when I think about the other [countries] like Germany.

As we noticed with John earlier, Cillian seems to using *saghas* in the sense of *such as.*

PJ Pre 32   *tá sé saghas beagnach níos éasca,* 'it's kind of a little easier'
Niall Post 19   *tá mé saghas beag líofa,* 'I'm kind of a little fluent'

In both examples, *saghas* is used incorrectly with another quantifier.

Ross Post83-85   *nuair a bheidh tú ag staidéar go bhfuil/s_ eh saghas em*
                     lig na scíth agus sin é
Ross Post 83-85 when you'll be studying that/s- eh kind of em/relax and that's it

Ross was clearly struggling, perhaps at the end of a long narrative[42], to find a way of saying 'you need to relax' and, while *saghas* may potentially have helped, he seemed to grab at a well-known expression, *lig do scíth* and use it without making much effort to establish syntactic coherence.

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[42] Through error, Ross's post-test ran for almost 4 minutes instead of 2 minutes.

The evidence clearly indicates that *saghas*, while potentially of value, is prone to somewhat promiscuous and idiosyncratic use, and calls for greater attention and consideration in instruction than many of the other NDs. More will be said on this in Chapter 7. It is interesting to note that the targeted ND *cineál,* equivalent in meaning to *saghas* but derived from the English, is not used at all.

Table 6.18 Counts for 'n'fheadar cad eile'

N'fheadar cad eile, 'I wonder what else'				
Course 1	Pre	Post	Total	Change
/	0	0	0	0
Course 2	Pre	Post	Total	Change
Cal	0	2	2	+2
Garreth	0	1	1	+1
Sam	0	3	3	+3
Totals	**0**	**6**	**6**	**+6**

N'fheadar cad eile, detailed in Table 6.18, is an example of self-talk or thinking out loud. It signals to the listener that you are not yet complete, and are considering what or if there is anything else for you to say. *N'fheadar* itself, though targeted, was not used at all and will be discussed, with other unused NDs in Chapter 7. Unlike *n'fheadar*, *n'fheadar cad eile* has a clear and restricted discourse management function. Those who used the ND used it appropriately. In two cases (Cal Post 5, Sam Post 13-14) the students are listing items and break mid-way, the ND clearly functioning to help them think of items they may have forgotten and they proceed fluently to complete their list:

Cal Post 4-6	*Fraincis eh Fisic/eh n'fheadar cad eile/eh Cuntasaíocht*
Cal Post 4.6	French eh Physic/eh I wonder what else/eh Accounting

Garreth uses the ND in conjunction with another ND to complete a turn in a very natural manner:

Garreth Post 24	*an ábhar is tábhachtaí sa scoil agus*
Garreth Post 25	*n'fheadar cad eile*
Garreth Post 26	*ah sin é is dóigh*

Garreth Post 24	the most important subject in school and
Garreth Post 25	I wonder what else
Garreth Post 26	ah that's it I suppose

Overall the ND is used effectively as a discourse management device and aids the fluent delivery of the narrative. However, only three students in total used it, suggesting some

difficulties with the phrase. These may relate to difficulties noted above in relation to *n'fheadar.* Pronunciation may have intimidated some students; the negative particle *ní* is not typically reduced before other *fh-* and this may have been off-putting for them. It is interesting that only Course 2 students used the ND. Every shadowing class in Course 2 commenced with a shadowing of a speaker uttering all the targeted NDs. In all cases, they articulated the ND clearly and cleanly, and in five of 6 instances the ND alone, or with hesitation markers, comprised a speech run.

Table 6.19 Counts for 'ar aon nós'

Ar aon nós, 'anyway'				
Course 1	Pre	Post	Total	Change
Seán	0	1	1	+1
Eamon	0	1	1	+1
Rory	0	2	2	+2
Course 2	Pre	Post	Total	Change
Eoin	0	1	1	+1
Totals	**0**	**5**	**5**	**+5**

Table 6.19 presents counts for *ar aon nós.* This ND also has a clear discourse function of topic management, to mark a shift in topic focus, reversion to former topic or movement towards a conclusion. Two students use the ND to start drawing his narrative to a conclusion; another concludes with the ND rather abruptly but softens the sudden *I finished* with the ND:

EW Post 44   *agus eh tá mé críochnaithe ar aon nós*
EW Post 44   and eh I'm finished anyway

Other students who use the ND to draw to a conclusion use a similar pattern, both move from a more specific topic to make a more general point and then conclude. John talked about the fun he has with his friends and uses *ar aon nós* to initiate a general point about how lucky he is to have good friends. In using the ND in this manner, he displays good discourse competence Rory's use of the ND is considered further in Section 6.6.

Both Rory and Eoin also use the ND to revert to a topic. Rian does so quite skilfully. He has been talking about his love of languages.

Rian   Post 6   *níl mé líofa ach fós is breá liom iad ar aon nós*
Rian   Post 7-9   *is breá liom iad/mar/ceapaim go bhfuil siad éasca*

Rian   Post 6   I'm not fluent but still I love them anyway
Rian   Post 7-9   I love them/because/I think they are easy

Rian counters a negative statement about his ability with a strong ND *ach fós,*'but still', repeats his assertion of positive feelings towards languages and uses *ar aon nós.* On this occasion, *ar aon nós seems to* underscore *ach fós* (but still), in the sense of meaning *regardless.* He is then able to reiterate and discuss his love for languages. Overall, *ar aon nós*, then, is used appropriately and effectively in discourse management by these students, and by some quite deftly so.

From a detailed examination of frequently used NDs, it is time to present a more general picture. Hypothesis 3 contends that proceduralization of targeted NDs will make a significant contribution to fluency gains of students. We have seen there is a wide variety in the NDs used most frequently by students post-test, and they are used to carry out a range of functions. To get a broad picture of use, it is possible to see four groupings.

1. Use as macro-organisers: *ar dtús, sin é, sin é go díreach, rud eile, chomh maith leis sin, bhuel, ar aon nós* 'at first, that's it, that's just it, another think, as well as that, well, anyway'.
2. Use for topic focus, illustration: *cosúil le, go háirithe, mar shampla,* 'like, especially, for example'.
3. Use as fillers, hedges, modifiers: *saghas, n'fheadar cad eile, sea, b'fhéidir,* 'kind of, I wonder what else, yes'.
4. Use for assertion: *is dóigh liom, is dócha, ar ndóigh,* 'I'd say, I suppose, of course'.

While we know students have on occasions used NDs for purposes other than those specified in this classification, it is nevertheless useful in terms of establishing general patterns of use. The figures are quite striking, see Table 6.20**.** They reveal that NDs with restricted, stable meaning and discourse function at a macro-management level dominate. The degree to which acquisition is a factor of saliency in input, of perceived discourse benefit and of confidence in use is clearly a question for further research. In Chapter 7, the challenge for teachers in facilitating acquisition and use of NDs with high benefit value but less frequently used in L2 is addressed.

Table 6.20 Functions of targeted NDs post-test

Function	Instances	% of Total
Group 1 Topic management	67	46%
Group 2 Topic illustration, focus	30	20%
Group 3 Fillers, modifiers	26	18%
Group 4 Assertion	24	16%

Overall counts pretest and post-test, shown in Table 6.21, reveal there is clearly a significant increase in the numbers of NDs used, almost a four-fold increase. This tells us *Bladair* had some effect, which is not altogether unexpected, but this raw data tells little about the manner of use or effectiveness of use. Fluency data presented in 6.3.1 indicated that the speech runs of students were not extended, but that more of the recording time was spent talking. The fact that we also see both increased ND use and increased PTR suggests, it is argued, that students used NDs to assist them in the delivery of their narratives. Careful analysis of transcripts demonstrates that students' use of the NDs was, for the more part, accurate in articulation, appropriate to context and purposeful in a variety of ways. Multiple use of a ND by individual students is infrequent, post-tests show 20 instances of students using a ND twice, and just three instances of NDs used three times. On the other hand, on average students used 1.5 NDs pretest, a surprisingly low usage count given the familiarity of many of the NDs and their high functional value. Post-test students used on average 6 NDs post-test. So we have a pattern of more NDs used, and this as a result of more types being used.

In fact, Table 6.20 and, more importantly, close inspection of individual instances, reveal that most students used a variety of NDs fulfilling a variety of functions. The ND used was prompted in the main by demands of the discourse context or demands of cognitive pressure. Either way, the apt and ready use of NDs supported students in speaking fluently.

To conclude, the apt and ready use of NDs in participants' narratives, and the prosodic features of NDs produced, testifies to those NDs being, in the main, proceduralized. Hypothesis 3, that targeted NDs will show evidence of proceduralization, is thus supported.

6.3.4 Hypothesis 4: Counts for targeted NDs

Hypothesis 4: The use of targeted NDs will make a significant contribution to fluency gains that arise.

The closeness of the targeted ND count across courses, see Table 6.21, for both pretests and post-tests, is quite striking. An increase of some four-fold is also noteworthy.

Table 6.21 Pretest and post-test counts for targeted NDs

	Pretest	Post-test	Increase
Course 1 (n=15)	23	84	61 (365%)
Course 2 (n=12)	20	85	65 (425%)
Total	43	169	126 (393%)

Of course this raw data in itself tells us little of the contribution NDs may have made to fluency gains. In Wood's case-study (2009), fluency gain was established by increased MLR and faster speech rate. Analysis of this case-study showed the syllable contribution from increased FS use contributed significantly to the increased MLR.

We have seen that the fluency gains in *Bladair* are of a different nature: stable MLR, reduced MLP and increased PTR. A correlation between increased ND use and fluency gains is proposed. To assert such a correlation, it was necessary to establish a case through a qualitative examination of ND use. Indeed Wood is also interested in exploring the nature of FS use and in the study just mentioned (2009) he examines FSs carefully with regard to type and function. The detailed examination carried out in Sections 6.3.2 and 6.3.4 supported Hypothesis 3, that NDs for the most part show evidence of proceduralization. Table 6.21 establishes a significant increase in the use of NDs. Earlier, in Figure 6.6 Section 6.2, the proceduralization pattern indicated by fluency data for *Bladair* was schematically represented. Following the closely examination of targeted ND use by course participants, that schematic representation can be revised to illustrate the posited contribution of targeted NDs to this pattern. Figure 6.7 depicts the pattern of fluency gains for *Bladair* and illustrates the role of NDs in post-test performance by suggesting that participants were supported in speaking more and making shorter pauses through the use of proceduralized NDs. These NDs both eased cognitive processing and assisted in discourse management

Pretest				
Speech δ δ δ δ (5 syllables)	*Pause*	*speech* δ δ δ (4 syllables)	*pause*	*Speech* δ δ δ δ (5 syllables)

Post-test						
Speech **ND** δ δ δ δ (5 syllables)	*pause* →	*speech* δ δ δ (4 syllables)	*Pause*	*speech* δ δ δ ND δ (5 syllables)	*pause*	*speech* δ δ ……

Figure 6.10 Proceduralization Pattern 2, incorporating ND use
(time constant across tests)

Hypothesis 4, 'use of targeted NDs will make a significant contribution to fluency gains that arise' is thus supported by the full range of qualitative and quantitative data presented.

6.3.5 Hypothesis 5 and 6: Other FSs and fluency

Hypothesis 5: There will be evidence of greater use of FSs, other than targeted NDs, by students.

Hypothesis 6: The contribution of nontargeted FSs to fluency gains will not as great as in the case of targeted NDs.

Hypothesis 5 proposes that there will be evidence of greater use of FSs, other than targeted FSs, by students and Hypothesis 6 adds that their contribution to fluency gains will not be as great as in the case of targeted FSs. As specified in 6.4, three potential sources will be considered: 1) nontargeted NDs, 2) input from shadowing and 3) more general use of formulaic language. These potential sources considered are considered separately, therefore the hypotheses are best considered in tandem. Consideration will first be given to the use of nontargeted NDs

1. Nontargeted NDs

Fifteen nontargeted NDs in all were preselected for examination of use. Criteria used to make this selection were that the NDs would be familiar to students and that a range of discourse functions and fluency devices would be represented. Table 6.22 gives a brief description of each ND and counts for use pretest and post-test. Data is presented in order of frequency of use for post-test.

Table 6.22 Use of nontargeted NDs

ND	Function	Pretest Course		Post-test Course		Totals	Totals
		1	2	1	2	Pre	Post
a lán a lot	Modify quantity Emphasis	20	18	27	16	38	43
ceapaim I think	Assertion	12	12	18	17	24	35
freisin also	Connector Topic elaboration	10	15	15	11	25	26
chun in order to, for	Connector Purpose	12	3	9	2	15	11
ar fad all, the whole	Modifier Emphasis	3	2	5	1	5	6
mar sin so, as a result	Connector Cause/effect	4	0	2	4	4	6
fós, ach fós but still, yet	Connector Topic shift	1	0	2	1	1	3
rudaí mar sin, things like that	Vagueness tag Complete run	2	2	0	3	4	3
den tuairim of the opinion	Assertion	0	0	0	2	0	2
rud éigin something	Vagueness tag Filler	3	0	1	0	3	1
i ndáiríre really, seriously	Intensifier Emphasis	0	1	0	1	1	1
go leor plenty, enough	Modify quantity Emphasis	1	0	0	1	1	1
ceart go leor fine, ok	Filler Topic control	6	0	1	0	6	1
ar chor ar bith at all	Modifier Emphasis	0	1	1	0	1	1
áfach however	Connector Topic shift	0	0	0	0	0	0
Totals		**74**	**54**	**86**	**59**	**128**	**145**

Apart for *ceapaim*, changes across courses are marginal overall, with no evidence of a proceduralization effect being generalised from targeted to nontargeted NDs. The overall picture is one of low use of most of the NDs, contrasted with high counts for four. The discrepancy in use of *chun* between courses is a distortion. Four students in Course 1 used *chun* repeatedly when hesitant; these repetitions account for seven instances each in pretest and post-test. Consideration of the three NDs used frequently may contribute to our understanding of proceduralization of NDs, these are *ceapaim, a lán* and *freisin,* 'I think, a lot of, also'.

We noted earlier the low use of *is dóigh liom*, 'I think, I'd say', and it was suggested that the ND was probably competing with *ceapaim.* The fact that use of *ceapaim* increased almost 50% post-test is interesting. Students were using a ND with assertion function more – but one they had already lexicalised. Confidence and ease with that ND may have inhibited them from exploring a similar but more nuanced ND. Syntactic problems with *is dóigh liom* were also noted earlier, *ceapaim* likewise is used with the same syntactic errors.

A similar problem of one ND being overused and another close in meaning underused can be seen with *a lán* and *go leor. A lán* corresponds closely to the English, *a lot of,* and is more restricted in meaning than *go leor,* 'many, plenty, enough'. *A lán* attaches easily to many frequently used nouns, *daoine, fadhbanna, rudaí,* 'people, problems, things'.

With regard to *chomh maith leis sin*, 'as well as that', understanding of meaning and function were unlikely to have caused difficulties for students. Apart from competing with a very familiar item, the item may have posed articulation challenges: a four-syllable item, the final two syllables with may have posed more difficulties for students than the single word, *freisin* 'also'. It is probably not possible to do more postulate there might be a correlation between counts across courses for *chomh maith leis sin* and *freisin,* see Table 6.23 for counts.

Table 6.23 Counts for equivalent NDs

	Course 1		Course 2	
	Pretest	Post-test	Pretest	Post-test
Freisin	10	15	15	11
Chomh maith leis sin	0	2	0	5

To conclude, improvements in use of nontargeted NDs are marginal and use of nontargeted NDs cannot be considered to have made a contribution to fluency gains of students. Above

all, it is striking that students draw from a very limited range of NDs and tend to draw on an even smaller number very frequently. Undoubtedly the speech of most speakers is characterised by high frequency use of certain NDs. However, it is a basic principle of *Bladair*, for reasons discussed in Chapter 3, that extending the functional range of NDs available to students would benefit their discourse management considerably. If a word like *ceapaim* comes to be used as a filler, as may the case for some students, it could also potentially create pressure for students, both in syntactically embedding it and in following on with propositional content.

2. FSs from Shadowing

A variety of FSs were highlighted for attention in the shadowing procedure, see Volume 2for details. A corpus search reveals very low use overall made of targeted FSs and other phrases present in shadowing input for Course 1, detailed in Table 6.24, with the exception of *is dócha.* This phrase may have been noticed more by Course 1 participants overall because it was also used, four times, in the narration on 9/11 which the students had engaged with quite intensively. This narration was not used in Course 2.

Table 6.24 Shadowed input and test data Course 1

Present in Shadowed Audio	Present in Course 1 Post-test data	Instances
Den chuid is mó 'for the most part'	Michael 1-4 *is maith liom a bheith i mo chon_ i i chónaí in Éirinn is dócha* **den chuid is mó** 'I like living in Ireland I suppose for the most part'	1
A chur ar bun 'to set up'	David 22-2*3 tá tú ábalta chun ceist* **a chur ar** *aon duine* 'you're able to ask anyone a question'	1
I gcónaí 'always'	Cormac 27-28 *bíonn an em an ghrian eh* **i gcónaí** *ag tait_* 'the sun is always sh_'	1
I gceist 'in question'	Cillian 18-19 *nuair atá na daoine* **i gceist** 'when it's the people who are in question'	1
Ar fad 'entirely, all'	Tadhg 4, Conor 22, Dan 33 *an t-am* **ar fad** 'the whole time' Dan 8 *mo chlann* **ar fad** 'my whole family'	2
Is dóigh 'suppose, think'	Instances already examined	3
Ar ndóigh 'of course'	Instances already examined	1
Is dócha 'probably'	Instances already examined	8

Data presented in Table 6.25 shows that Course 2 students clearly benefitted more from the shadowing activity, no doubt because of their more frequent engagement with the activity.

Few phrases were used from shadowing, and we have already noted that *ar ndóigh* was used by 10, but in restricted way and only once within the narrative. Students seemed to find it easier instead to recycle longer chunks, and a few students adapted them to their own stories, e.g. Eoin 5-6 and Ciarán 29-30 below. In all cases the students stitched these chunks into their narrative, and doing so would likely have benefitted their fluency gains. However, the chunks appear to have limited functionality for students, a case of 'all or nothing' production, with no evidence of FSs within the chunks being employed elsewhere.

Table 6.25 Shadowed input and test data Course 2

In Shadowed Audio	Course 2 Post-test data
Is aoibhinn liom I love	Cal 22, Andy 9, Sam 29,Garreth 12, Ciaran 6, Niall 18, 29, Ross 11, Colm 16
Gaeilge ar ndóigh Irish of course	Instances already examined, increase + 10
Is aoibhinn liom na teangacha agus táim líofa go leor iontu mar chaith mé tréimhsí sa Ghaeltacht I love languages and I'm fluent enough in them because I spent time in the Gaeltacht	Andy 9-11 *Is aoibhinn liom na teangacha agus chaith mé tréimhsí sa Gh_ sa Ghaeltacht* I love languages and I spent time in the G_ in the Gaeltacht Ross 11 *Is aoibhinn liom an Fraincis eh mar tá mé líofa eh mar eh caithim mé a lán am sa Fhrainc* I love French eh because I'm fluent eh because eh I spend a lot of time in France Eoin 5-6 *Is aoibhinn liom na teangacha, nil mé líofa ach fós* I love languages, I'm not fluent but still
Faighimse an Cheimic an-deacair, níos deacra ná mar a cheap mé mar rinne mo dheartháir é don Ardteist agus dúirt sé liom go raibh sé an-éasca I find Chemistry very difficult, more difficult than I thought because my brother did it for the Leaving and told me it was easy	Garreth 41-47 *Faigheann mise an Cheimic ana-deacair, eh níos deacra nuair mar a cheapann mé mar dúirt mo dheartháir go bhfuil sé ana-éasca* I find Chemistry very difficult, eh more difficult than I thought because my brother said it was very easy Ciaran 29-30 *Rinne mo dheartháir é don Ardteist agus dúirt sé liom go raibh sé éasca ach ní cheapaim go bhfuil sé éasca* My brother did it for the Leaving and told me that it was easy but I don't think it's easy Niall 22-24 *Faighimse an eh ábhar seo eh ana-éasca* I find the eh the subject eh very easy Niall 43 *Faighimse Ceimic ana-dheacair* I find Chemistry very difficult
Is peata ceart í. Tá sí chomh crosta le mála easóg. She's a right pet. She's as cross as a bag of stoats.	Richard 12-15 *Is peata ceart í. Eh tá sí chomh crosta le mala easóg eh nuair bhím ag troid* She's a right pet. Eh she's as cross as a bag of stoats eh when I fight
Is maith liom a bheith aclaí I like to be fit	Colm 27 *Is maith liom a bheith, a bheith aclaí* I like to be fit

3. Other Formulaic Sequences

We have seen thus far that nontargeted NDs and input from shadowing have not contributed in a significant way to fluency gains. Finally, consideration will be given to more general use of FSs. It is possible that participation in *Bladair* may have prompted students to chunk frequently recurring combinations more. As we saw in Chapter 3, this process would facilitate faster lexical retrieval times. An examination was carried out on a third of the participants, a total of nine randomly selected tests, five from Course One and four from Course Two. A template developed by Wood (2009) was used to identify potential instances of formulaic language in individual students, pretest and post-test, this template specifies functional categories. There may well be overlap across categories and a phrase might fulfil a number of functions, however the template is used basically to facilitate establishing counts across students in a consistent manner and not for the purpose of exploring use. Table 6.26 lists the categories and give examples of FSs for each.

Table 6.26 Selection of nontargeted FSs for inspection

Temporal marker	*uaireanta*, 'sometimes' *fós* , 'still'
Quantity marker	*a lán daoine*, 'a lot of people' *na hábhair go léir*, 'all the subjects' *deartháir amháin*, 'one brother'
Spatial marker	*is as Baile Átha Cliath*, 'is from Dublin' *an áit sin*, 'that place'
Stance marker	*ceapaim go*, 'I think that' *ba cheart*, 'there should be'
Fluency device	*níl a fhios agam*, 'I don't know' *i ndáiríre*, 'really' *ceart go leor*, 'alright'
Textual function	*freisin*, 'also' *nó*, 'or' *mar is eol dúinn*, 'as we know'
Verb-prep	*tá súil agam*, 'I hope' *ag caint faoi*, 'talking about' *is maith liom*, 'I like'
Cause, effect, purpose	*chun dul i gcóir,* 'to go for' *mar sin,* ' so' *mar go bhfuil,* 'because there is'
Comparison contrast	*an spórt is mó,* 'the main sport' *níos óíge ná*, 'younger than' *is iad na cluichí na rudaí is fearr*, 'the best games'
Sentence builder	*tá sé [éasca] X [a dhéanamh]*, 'it's easy to do X' *is maith liom a bheith ag –*, 'I like to – '
Other	*le chéile*, 'together' *ar an fhoireann céanna*, 'on the same team' *ar chor ar bith*, 'at all'

To be satisfied that selected potential FSs were produced in a manner consistent with production as a FS close consideration was then given to manner of production, both in articulation and contextual, as per the inspection of targeted NDs. Targeted NDs are not included in the data. This means the analysis, as an effort to establish FS use by students, may be compromised. We have seen, for instance, that ND use post-test increased but MLR was stable. It could be argued that some of the post-test NDs may have substituted for FSs students might otherwise have produced but such an argument is purely speculative. Table 6.27 gives counts for nontargeted FSs identified, full details are available in the transcripts in Volume 2.

Table 6.27 Use of nontargeted FSs
Pretest (a) and Post-test (b)

FSs	Cormac		Cillian		Dan		Michael		Jack		PJ		Richard		Eoin		Niall	
	A	B	A	b	a	b	a	b	a	b	a	B	a	B	a	b	a	b
Temporal	0	3	1	1	4	7	1	6	3	3	4	2	3	0	3	0	0	2
Quantity	2	1	3	2	1	3	3	1	2	0	1	5	3	6	2	3	0	2
Spatial	0	3	0	2	0	2	0	0	0	0	2	1	0	0	0	0	1	0
Stance	1	0	1	4	2	0	1	0	0	1	0	0	1	0	0	5	0	0
Fluency	1	0	1	0	0	0	2	2	1	1	0	0	0	0	2	2	1	0
Textual	1	2	0	3	0	1	1	2	0	1	1	2	1	1	3	0	1	2
Verb-prep	1	4	1	2	1	4	2	0	0	2	3	6	7	1	3	1	2	5
Cause	2	3	1	0	2	1	0	0	0	0	1	1	0	0	0	2	0	0
Comparison	0	0	0	2	2	1	3	1	0	3	5	1	1	1	1	1	0	0
Sen.Builder	3	0	2	3	5	3	2	4	1	2	2	0	0	0	0	0	0	0
Other	1	0	1	1	5	3	0	1	2	1	0	2	0	1	0	0	0	0
Total	**11**	**16**	**11**	**20**	**18**	**23**	**15**	**17**	**09**	**13**	**19**	**20**	**16**	**10**	**14**	**14**	**04**	**11**
Totals: Pretest 121, Post-test 144. Increase 19%																		

Cillian and Niall had particularly low increases in targeted NDs use post-test, increases of one and two respectively. Interestingly, they are the students with the highest increased use of nontargeted FSs, increases of 45% and 63% respectively. Results overall for nontargeted FSs show an increase of 19%, this can be considered significant but not strongly so.

To conclude, data detailed in Table 6.27 establishes that nontargeted NDs did not contribute to fluency gains, that FSs in shadowed audio made a marginal contribution and that more general FS use made a contribution but a modest one. Hypothesis 5, 'there will be evidence of greater use of FSs, other than targeted NDs, by students' is supported though not strongly

so. Hypothesis 6, 'the contribution of nontargeted FSs to fluency gains will not be significant, is also supported.

6.4 RQ3: Fluency gains and accuracy

Hypothesis 7: Post-test accuracy measures will not be lower than pre-test measures.

As stated in Section 6.2, a postulated conflict between attested fluency gains and linguistic accuracy will be explored by an examination of a selection of tests. Post-test transcripts for the nine students randomly selected for examination of Hypothesis 5 are examined carefully, with attention given to syntactic, inflectional and lexical accuracy. Errors frequently associated with student's discourse in Irish, both written and spoken, are in the selection and inflection of copular verbs, as noted in Section 6.4. Particular attention is given to the environment of targeted NDs. Errors are noted and a comparison made with pretest transcripts for evidence of similar errors. Repetitions, hesitations and self-corrected errors are not included in the mistakes catalogued below. Table 6.28 gives details of types of errors identified and codes used in following discussion. All instances of significant errors (syntactic, tense, verb choice) are noted but in the case of more minor errors such as mutation, a representative sample is noted from pretest and post-test transcripts.

Table 6.28 Error description

Error type/code	Description
COP Copular choice	Irish has 2 copular verbs. *Is* is used when noun phrases are joined. *Bí* is used in other cases. *Is* is inflected for present tense and conditional mood only, with negative, interrogative and relative forms. *Bí* is also inflected for future and past tenses and has a progressive and simple present. *(is) is rud éasca é* 'it's an easy thing; *(bí) tá sé éasca* it's easy
InDIR Indirect speech	Verbs following reporting verbs are preceded by a conjunction. Most are also subject to initial mutation.
MUT Mutation	Consonants at beginning of words may be subject to lenition and eclipsis.
VbINFL Verb inflection	- dependent/independent form - tense - verbal noun (infinitive and progressive form)
INFL inflection e.g. number	- noun - adjective - preposition
PREP Preposition choice	Learners often have difficulty, selecting appropriate preposition, frequently translating directly from the English.
OM Omission	Omission of a required lexical item
SYN Syntactic order	Irish syntactic order is SVO, and syntactic position of some other phrases diverges from English
LEX Lexical use	- restricted use - word combination

Data is presented throughout in the manner detailed and illustrated below:

Grammatical error code	→	InDIR – *is*
Line in transcript	→	Post 13
1. Utterance. Error underlined	→	1. *b'fhéidir go maith liom*
2. Translation	→	2. 'maybe I'd like'
3. Utterance corrected. Correction underlined.	→	3. *b'fhéidir gur mhaith liom*

Table 6.29 Accuracy data, Michael

Post-test	MICHAEL	Pretest
InDIR – *is* Post 13 1. *b'fhéidir go maith liom-* 2. 'maybe I'd like' 3. *b'fhéidir gur mhaith liom*		InDIR – *is* Pre13 1. *b'fhéidir is é Laidin* 2. 'maybe it's Latin' 3. *b'fhéidir gurb é Laidin*
MUT – interrogative verb Post 20 1. *cosúil le an beidh mé* 2. 'like will I be' I 3. *cosúil le an mbeidh mé*		INFL – preposition Pre 1 1. *do na Ardteist* 2. 'for the Leaving Cert' 3. *don Ardteist*
INFL – adjective Post 6 1. *tá na daoine an- mhaithe* 2. 'the people are very good' 3. *Tá na daoine an-mhaith*		PREP – choice Pre 33 1. *na hábhair go léir i Ardleibhéal* 2. 'all the subjects at Higher Level' 3. *na hábhair go léir ag Ardleibhéal*
INFL – noun Post 27 1. *na scoil* 2. 'the school' 3. *na scoileanna*		OM - preposition Pre 11-12 1. *bhí suim agam ábhair sin* 2. 'I was interested in those subjects' 3. *bhí suim agam sna hábhair sin*
		LEX – word combination 1. *ag déanamh é* 2. 'doing it' 3. *á dhéanamh*

Table 6.29 details data for Michael. Michael makes few mistakes post-test. One is associated with use of a ND. *B'fhéidir* at the beginning of a propositional clause is followed by indirect speech. Michael needs to use the indirect marker of the verb *is* (*gur)* but instead uses the present tense indirect marker of the verb *bí*. Post-test the same syntactic structure is required, this time he does not mark for indirect speech: post-test *b'fhéidir go maith liom,* pretest *b'fhéidir is é Laidin.* Other errors are more minor, and overall there are more errors present pretest than post-test.

Table 6.30 Accuracy data, Dan

Post-test	DAN	Pretest
VbINFL – dependent form OM – conjunction Post 1 1. *an laethanta saoire is fearr a bhí agam nuair a <u>dheachaigh</u> mé* 2. 'the best holiday I had was when I went' 3. *an laethanta saoire is fearr a bhí agam <u>ná</u> nuair a <u>chuaigh</u> mé* VbINFL – dependent form Post 7 1. *nuair a <u>rabhas</u>* 2. 'when I was' 3. *nuair a <u>bhí mé</u>*	OM – verb Pre 26-27 1. *bhí orainn… síos* 2. 'we had to go down' 3. *bhí orainn <u>dul </u>síos* Pre 56-57 1. *ceart go mbuafaidh* 2. 'they should win' 3. *<u>ba</u> cheart go mbuafaidh siad* INFL - number Pre 2 1. *cúpla <u>daoine</u>* 2. 'a couple of people' 3. *cúpla <u>duine</u>* Pre 16 1. *<u>Ocht daoine</u>* 2. 'eight people' 3. *<u>ochtar</u>*	

Details for Dan are presented in Table 6.30. Dan makes few errors pretest or post-test. The syntactic error made post-test was delivered as a complete run, in fact the opening to his narrative. It is the longest run in the narrative and the unusually long clause prior to the required conjunction, *ná,* may have resulted in its omission. Post-test he twice makes a mistake with a structure, using the dependent form of a verb when the independent form is required. This error is not made in the context of a targeted ND, but after the phrase *nuair a*, and is a recognized difficulty for some students. He does not use the phrase pretest so a direct comparison cannot be made.

Table 6.31 Accuracy data, Cormac

Post-test	CORMAC	Pretest
COP, INFL – tense Post 1-2 1. *is dócha <u>go bhfuil</u> laethanta saoire a <u>taitneamh</u> liomsa ná* 2. 'I suppose a holiday I enjoyed was' 3. *is dócha <u>gur</u> laethanta saoire a <u>thaitin</u> liomsa ná* COP 1. *is dóigh liom <u>gur go bhfuil sé áit</u>* 2. 'I think it's a place 3. *is dóigh liom <u>gur áit é</u>* INFL – infinitive Post 39 - 40 1. *chun <u>faigh</u> ..chun <u>breathnamh</u> ar* 2. 'in order to get.. to look at' 3. *chun <u>a fháil</u>... chun <u>breathnú</u> ar* PREP inflection Post 37 1. *<u>sa an</u> Spáinn* 2. 'in Spain' 3. *<u>sa</u> Spáinn*	COP Pre 18-19 1. *ceapaim <u>go bhfuil</u>… ceann is maith liom* 2. 'I think one I like is' 3. *ceapaim <u>gurb é</u>… ceann is maith liom* INFL - infinitive Pre 13 1. *é a <u>thuigint</u>* 2. 'to understand it' 3. *é a <u>thuiscint</u>* INFL - tense Pre 27 1. *<u>Ceap</u> mé go bhfuil* 2. 'I think there is' 3. *<u>Ceapaim</u> go bhfuil* LEX – combination, MUT – verb Pre 30 1. *<u>má ní faigheann</u> tú* 2. 'if you don't get' 3. *<u>muna bhfaigheann</u> tú* LEX – combination, MUT – verb, noun, Pre 31 1. *<u>má ná déanann</u> tú <u>na ábhair a maith</u> leat* 2. 'if you don't do the subjects you like' 3. *<u>muna ndéanann tú na hábhair is maith</u> leat*

Table 6.31 shows Cormac's difficulties with use of the correct copula in indirect speech are present pretest and post-test, pretest they occur with *ceapaim,* post-test with targeted NDs *is dócha* and *is dóigh liom.* Difficulties with inflection of present participle forms are also evident pretest and post-test. Evidence overall suggests he has some difficulty with discourse management pre-test. The mistakes noted under 'LEX, pretest' illustrates this. He attempts to make a complex point which seems to be beyond his linguistic competence, and runs into significant difficulties. Discourse control is analysed further in Section 6.6.

Table 6.32 Accuracy data, Cillian

Post-test	CILLIAN	Pre-test
LEX – incorrect use of preposition Post 5 1. *Tá <u>faoin tuath</u> go hálainn* 2. 'the countryside is lovely' 3. *Tá <u>an tuath</u> go hálainn*	LEX – incorrect word Pre 6-8 1. *is maith liom gach ábhar <u>ach</u> Gaeilge* 2. 'I like every subject except Irish' 3. *is maith liom gach ábhar <u>seachas</u> Gaeilge*	
LEX – incorrect use of item Post 49-50 1. *<u>Saghas Gearmáin</u>* 2. 'like Germany' 3. *<u>cosúil leis an nGearmáin</u>*	INFL – verbal adjective Pre 12 1. *<u>múintiú</u>* 2. 'taught' 3. *múinte*	
INFL - noun Post 56 1. *nuair a cheapaim <u>faoi Éire</u>* 2. 'when I think about Ireland' 3. *nuair a cheapaim <u>faoi Éirinn</u>*	PREP – incorrect choice 19-21 1. *suimiúil <u>mar an an</u> dalta* 2. 'interesting for the student' 3. *suimiúil <u>don</u> dalta*	
OM Post42-43 1. *tá abhann* 2. 'there's a river' 3. *tá abhann <u>ann</u>*	INFL - verb, noun (genitive) Pre 27-29 1. *tá <u>a lán eolas</u>...<u>a fhoghlaim</u>* 2. 'there's a lot of …knowledge to learn' 3. *tá <u>a lán eolais</u> ...<u>le foghlaim</u>*	
INFL – adjective Post 52 1. *<u>daoine difriúil</u>* 2. 'different people' 3. *<u>daoine difriúla</u>*		

Table 6.31 shows that lexical and inflectional errors are the main errors made in Cillian's pretest and post-test, with no significant changes between tests. He uses indirect speech once, and correctly, pretest, *ceapaim go bhfuil sé* + ADJ (line 9-11). In the post-test the following examples are found:

Line 3 *Ceapaim go bhfuil, is é Éire an tír…*

Line 20 *Ceapaim go bhfuil, is iad na daoine*

It appears he is about to utter *ceapaim go bhfuil Éire, ceapaim go bhfuil na daoine,* and to make an error similar to that noted with Michael earlier, but recognises the syntactic problem and neatly side-steps it by recommencing with a direct statement.

Table 6.33 Accuracy data, Jack

Post-test	JACK	Pretest
COP		COP
Post 1 - 3		Pre 6
1. *tá peil Ghaelach an spórt*		1. *bhí mé cinnire*
2. 'Gaelic football is the sport'		2. 'I was a leader'
3. *is í peil Ghaelach an spórt*		3. *ba chinnire mé*
Post 10 - 11		Pre 7-8
1. *tá siad an club*		1. *ní raibh mo chol ceathrair cinnire*
2. 'they are the club'		2. 'my cousin wasn't a leader'
3. *is iad an club*		3. *níor chinnire é mo chol ceathrair*
InDIR - COP		InDIR
Post 37-38		Pre 28
1. *ceapaim go bhfuil haca an spórt*		1. *b'fhéidir beidh mé*
2. 'I think hockey is the sport'		2. 'maybe I would be'
3. *ceapaim gurb é haca an spórt*		3. *b'fhéidir go mbeinn*
Post 4 - 5		
1. *is dócha go bhfuil peil Ghaelach is fearr…*		INFL – number
2. 'I suppose Gaelic football is my favourite		Pre 43
3. *is dócha gurb é peil Ghaelach is fearr..*		1. *sa chúig bhliain*
		2. 'in fifth year'
InDIR - INFL		3. *sa chúigiú bliain*
Post 28/32		Pre 55
1. *b'fhéidir beidh mé*		1. *dhá chairde*
2. 'maybe I will be'		2. two friends
3. *b'fhéidir go mbeidh mé*		3. *beirt chairde*
SYN		OM
Post 44-45		Pre 45
1. *níl mé ag iarraidh déanamh snámh*		1. *Tar éis Gaeltacht*
2. 'I don't want to swim'		2. 'after the time in the Gaeltacht'
3. *níl mé ag iarraidh snámh a dhéanamh*		3. *tar éis an tréimhshe sa Ghaeltacht*
		Pre 12 - 13
INFL – verbal adjective		1. *thug mé an cinnire tí*
Post 41		2. 'I gave the job as house leader'
1. *tá mé críochnaigh*		3. *thug mé an post mar chinnire tí*
2. 'I'm finished'		
3. *tá mé críochnaithe*		
PREP		
Post 22-23		
1. *bhí mé níos fearr ó peil*		
2. 'I was better at football'		
3. *bhí mé níos fearr ag peil*		

Table 6.33 presents details for Jack. Jack makes syntactic errors, using the wrong copular verb. He also does not inflect for indirect speech. Both difficulties are clearly evident pretest and post-test but he uses indirect speech more post-test than pretest. One of the errors with reported speech is replicated across tests, *b'fhéidir beidh mé*. More lexical errors are evident

pretest. To establish if increased errors were connected to fluency gains, fluency measures for Jack were examined. Post-test measures show few gains: marginal improvements in PTR and MLP, marginal decrease in MLR and a decrease in articulation rate. It is possible that the increased syntactic errors relate to narrative topics, in his pretest Jack talked about how he had spent the previous summer, post-test was a more discursive narration about his interest in sport.

Table 6.34 Accuracy data, PJ

Post-test	PJ	Pretest
SYN, INFL – number Post 23-34 1.*is é daoine cairde* 2. 'people are friends' 3. *is daoine iad cairde* VbINFL – tense Post 4 1. *bhí cluiche mór ar siúl… agus níl mé ábalta* 2. 'there was a big game going on… and I wasn't able' 3. *bhí cluiche mór ar siúl…agus ní raibh mé ábalta* INFL – noun Post 13-14 1. *bíonn t-am ar fheabhas again* 2. 'we have a great time' 3. *bíonn am ar fheabhas again* Post 18 1. *a lán ceolchoirm* 2. 'a lot of concerts' 3. *a lán ceolchoirmeacha* OM Post 17 1. *tá a lán cairde sa cheolfhoireann* 2. 'I have a lot of friends in the orchestra 3. *tá a lán cairde agam sa cheolfhoireann*	COP Pre 20 1. *Níl sé an spórt is fearr liom* 2. 'it's not my favourite sport' 3. *ní hé an spórt is fearr liom* VbINFL – tense Pre 7-9 1. *nuair a bhí mé abhaile d'imrím, imir mé, imríonn mé* 2. 'when I'm at home I play' 3. *nuair a bhím abhaile imríonn mé* INFL – noun Pre 38 1. *an imreoir* 2. the player 3. *an t-imreoir* PREP, INFL – genitive not required Pre 19 1. *ceathrú foireann ar na scoile* 2. 'the school's fourth team' 3. *ceathrú foireann ag an scoil* PREP Pre 21 1. *ag féachaint ar spórt ag an teilifís* 2. 'looking at sport on the television 3. *ag féachaint ar spórt ar an teilifís* LEX Pre 31-32 1. *tá sé saghas beagnach níos éasca* 2. 'kind of a little easier' 3. *tá sé beagán níos éasca* OM, LEX Pre 25-26 1. *an sláinte sa spórt* 2. 'the health (connected with) sport 3. *an tsláínte a bhaineann le spórt*

Details for PJ are shown in Table 6.33. Post-test PJ makes a word order error, but uses the correct copular form whereas pretest he makes this error. Overall, there are fewer mistakes made post-test

Table 6.35 Accuracy data, Richard

Post-test	RICHARD	Pretest
COP Post 27 1. *is é mo chairde an-tábhachtach* 2. 'my friends are very important' 3. *tá mo chairde an-tábhachtach*		COP Pre 24 1. *Tá sé a lán craic* 2. 'it's a lot of fun' 3. *'is craic é*
VbINFL – tense Post 28 1. *bíonn a lán cairde agam* 2. 'I've a lot of friends' 3. *tá a lán cairde agam*		INFL – genitive not required Pre 3/6 1. *is breá liom sacar, leadóige* 2. 'I love soccer, tennis' 3. *is breá liom sacar, leadóg*
PREP Post 25-26 1. *sin díreach é le mo chlann* 2. 'that's it about my family' 3. *sin díreach é faoi mo chlann*		INFL – number Pre 10 1. *na spórtanna sin* 2.' those sports' 3. *na spóirt sin* Pre 35 1. *is é na cluichí* 2. 'they are the games' 3. *is iad na cluichí* OM Pre 25 1. *nuair a bhímid imirt spóirt* 2. 'when we play sport' 3. *nuair a bhímid ag imirt spóirt* LEX Pre 24 1. *is a lán craic é* 2. it's great fun 3. *is craic iontach é*

Table 6.34 shows that Richard employs the incorrect copular verb once post-test and once pretest. Overall there are fewer mistakes present post-test.

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Table 6.36 Accuracy data, Eoin

Post-test	EOIN	Pretest
COP Post 33-34 1. *ceapaim go bhfuil Fraincis an teanga* 2. 'I think French is the language' 3. *ceapaim gurb í Fraincis an teanga* INFL Post 22 1. *mo hábhair féín* 2. 'my own subjects' 3. *m'ábhair féín* LEX Post 26 1. *Amach scoil* 2. 'outside of school' 3. *taobh amuigh den scoil* Post 15-16 1. *níl a fhios agam go bhfuil siad tábhachtach* 2. 'I don't know if they're important' 3. *níl a fhios agam an bhfuil siad tábhachtach*	SYN Pre 2 1. *ag imirt é* 2. 'playing it' 3. *á imirt* Pre 20 1. *is rugbaí an spórt is mó* 2. 'rugby is the main sport' 3. *is é rugbaí an spórt is mó* INFL – genitive required Pre 15 1. *cluichí cispheil* 2. 'basketball games 3. *cluichí cispheile* INFL – nouns, genitive required Pre 21 - 23 1. *is mise an imreoir cispheil sa scoil le mo foireann* 2. 'I'm the basketball player in the school with my team' 3. *is mise an t-imreoir cispheile sa scoil le mo fhoireann*	

Table 6.35 shows that in his post-test Eoin uses the wrong substantive verb in reported speech. He does not use reported speech at all in his pretest, so it is not possible to make a comparison across tests. In the three other instances of reported speech post-test, *go bhfuil* is used correctly. Overall there is no evidence of an increase in errors post-test.

Table 6.37 Accuracy data, Niall

Post-test	NIALL	Pretest
LEX, SYN, INFL – genitive not required Post 41-43 1. *ba mhaith liom an <u>eacnamaíochta</u> agus Gearmáinis <u>staidéar</u>* 2. 'I'd like to study economics and German' 3. *ba mhaith liom <u>staidéar a dhéanamh ar</u> an eacnamaíocht agus Gearmáinis* LEX Post 1 1. *ar dtús tá mé <u>ag</u> caint faoi* 2. 'first of I'm going to talk about' 3. *ar dtús táim <u>chun</u> caint faoi* Post 20-21 1. *saghas <u>beag</u> líofa* 2. kind of fluent 3. *saghas líofa* INFL – noun (number, genitive, possession) Post 23-24 1. <u>*an ábhar scoil*</u> 2. the school subject' 3. <u>*an t-ábhar scoile*</u> Post 33 1. <u>*mo múinteoir*</u> 2. 'my teacher' 3. <u>*mo mhúinteoir*</u>	OM – prep Pre 9 1. *is maith liom ag féachaint rugbaí* 2.'I like looking at rugby' 3. *is maith liom ag féachaint <u>ar</u> rugbaí* INFL – genitive not required, number Pre 11-15 1. *is maith liom <u>cispheile</u> agus leadóg freisin ach ní imríonn mé <u>an spórt</u> sin* 2. 'I like basketball and tennis too but I don't play those sports 3. *is maith liom <u>cispheil</u> agus leadóg freisin ach ní imríonn mé <u>na spóirt</u> sin* PREP Pre 1 1. *go hiontach <u>do shláinte</u>* 2. great for health 3. *go hiontach <u>don tslainte</u>*

Table 6.37 shows that Niall makes a range of mistakes in both tests but there is no evidence of a significant increase in errors in a slightly longer post-test. Reported speech is used accurately by him pretest and post-test.

To conclude, the overall picture for the participants examined is one of 'as we were' except for Jack. Jack has particular difficulties with grammatical structures used incorrectly pretest, but used more often by him post-test. However it was noted he did not actually demonstrate fluency gains post-test. Hypothesis 7, that post-test accuracy measures will not be lower than pre-test measures, is therefore supported. A brief comment on automaticity and accuracy gains is warranted. In Section 2.2.1, we noted Bygate's comments that automated production is associated with accuracy 'to the extent that automated performance is resistance to interference from task pressure' (2009:419). It is not possible, of course, to deduce from findings of low effects of accuracy that speech is or is not automated. To pre-empt discussion in Chapter 7, participants of *Bladair* tended to use NDs in adjunct positions, as opposed to NDs syntactically embedded.

6.5 RQ4: Competence levels and FS use

Hypothesis 8: Higher ability students will both employ more NDs and use a greater range of these than lower ability students.

Hypothesis 9: Lower ability students will use targeted NDs to support their spoken narratives. These FSs will generally be employed in linguistically simple environments.

Hypothesis 10: Higher ability students will demonstrate competence in using NDs in linguistically complex environments

Competence is gauged on results achieved by the students in the Junior Certificate. This is not an entirely satisfactory measure of competence. Junior Certificate students are awarded grades with a 15% span. Of two students who are awarded a B, one might have got 70% and the other 84%, there is a large disparity in the language competence reflected in these marks but the distinction is not recorded in the grade given. To ensure a clear and reliable distinction was made between higher ability and lower ability students, it was decided to select from those students who got As and Ds in Junior Certificate Higher Level Irish. This procedure meant working from a small sample: three students who got a D grade and three who got an A grade (randomly selected). However, the key variable in Hypotheses 6, 7 and 8 is that of competence levels and it was essential this was securely identified.

To address Hypothesis 6, that numbers and range of NDs would vary across competence levels; analysis of types of NDs and frequency of use by students is presented.

To address Hypothesis 7, ND use by the three lower ability students will be examined carefully to determine if the environments are linguistically complex or simple. Of the lower ability students, Cal shows the greatest increase in use of targeted NDs. He used a high number of NDs post-test (11) and few pre-test (1). Inspection of use of targeted NDs by the two other lower ability students showed very restricted use by Colm and Garreth. This will be noted in due course but it was decided that the most appropriate method to address Hypothesis 7 was to complement an overview of use by the three students with an indepth qualitative examination and careful analysis of the manner in which NDs were employed by Cal in his post-test narrative.

Hypothesis 8 refers to *linguistically complex environments,* post-test transcripts of the three higher ability students will be examined to identify ND use in such contexts, any such instances will be analysed qualitatively.

Hypothesis 6: ND Count, Type and Function

Table 6.38 summarises data on ND use and function by the six students selected. Functional categories are derived from Table 6.20. Table 6.39 details the NDs used by students.

Table 6.38 Ability comparison, summary counts for NDs

NDs	Lower Ability	Higher ability
Type count	11	13
Token count	21	23
Topic management	12	9
Topic focus, illustration	5	7
Fillers, modifiers	3	3
Assertion	1	4

Table 6.39 Ability comparison, NDs used

NDs used: Types and Functions				
	Lower Ability		**Higher Ability**	
Topic management	Commence narrative *Bhuel,* well *Ar ndóigh,* of course	1 3	Topic shift *Chomh maith leis sin,* as well as that *Rud eile,* another thing *Ar aon nós,* anyway	1 2 2
	Topic shift *Chomh maith leis sin* as well as that *Agus rud eile* and another thing	3 1	Topic end *Sin é* *Sea*	1 3
	Topic end *Sin díreach é,* that's just it *Sin é is dóigh,* that's it I suppose	2 2		
	Total	**12**	**Total**	**9**
Topic illustration, focus	*Go háirithe,* especially *Mar shampla,* for e.g. *Cosúil le,* like	1 1 3	*Go háirithe,* especially *Mar shampla,* for e.g. *Cosúil le,* like *Cuir i gcás,* take for e.g.	2 2 2 1
	Total	**5**	**Total**	**7**
Fillers Modifiers	*N'fheadar cad eile* I wonder what else	3	*Sea,* yes *Saghas,* like, kind of	1 2
	Total	**3**	**Total**	**3**
Assertion	*Gan amhras,* without doubt	1	*Is dóigh liom,* I think *Is dócha,* I suppose *Cinnte,* certainly	1 2 1
	Total	**1**	**Total**	**4**

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It should be stressed again that the sample size is very small, and generalising more conclusively from it would, of course, require a significantly larger sample population. There is little disparity in overall counts for type and token use. However, examination of the counts does reveal some interesting patterns. Topic management counts expressed as a percentage of NDs for lower and higher ability students are 57% and 39% respectively. The percentage for all course participants is 46%, Table 6.38, suggesting that lower ability students constitute a disproportionate number in this category. Counts for fillers and modifiers are low for both groups and counts for assertion are higher for higher ability students. An analysis of this data is substantially enhanced, however, by giving attention to the contextual use of the NDs

Topic management NDs can play a critical role in giving a narrative cohesion and coherence. This can be particularly important in a narrative that is comprised mainly of paratactic syntax and is marked by abrupt topic shifts, a discourse characteristic of lower ability students. Topic management NDs typically occupy sentence initial or sentence final position, and the corpus shows this is the case for both ability groups with two exceptions. The sentence-internal use of *ar aon nós,* 'anyway', is explored below. *Ar ndóigh,* 'of course', occurs in a list and its special relationship with *Gaeilge* has already been noted in Section 6.3.3.

Exemplifiers used by both groups are in uncomplicated syntactic positions, all students use them before a noun phrase or prepositional phrase, *go háirithe sa samhradh,* 'especially in the summer'; *cosúil le obair,'* like work'. The fillers *n'fheadar cad eile* and *sea* are not syntactically embedded, *gan amhras* is an adjunct in sentence initial position, and *saghas* is used in the same prepositional phrase twice *de gach saghas,* 'of every kind'. Thus far, the NDs considered do not present syntactic challenges in use. Some possible reasons for underuse may be those noted in Section 6.4.3: low saliency in input, discourse benefit not understood or lack of confidence in use. Clearly there is need to explore underuse further, both to identify underlying issues and to be able to respond to these appropriately.

NDs used for assertion can present syntactic challenges in for students of Irish and these were already noted in the discussion on *is dóigh* in Section 3.4.3. It is highly likely this is a significant factor underlying the non-use by lower ability students of reporting verbs. *Gan amhras,* 'without doubt, there is no doubt that', is an adverbial adjunct, frequently used in sentence initial position. Not only do higher ability students use these items, they incorporate them in discourse in a way that is nuanced and demonstrates both competence and confidence. These examples are considered in the discussion on Hypothesis 8.

Data presented shows greater use of NDs for assertion by higher ability students, but counts otherwise do not show much disparity with those of lower ability students. Hypothesis 6 therefore is not supported.

Hypothesis 7 Lower Ability: A Case Study

Cal got D in Higher Level Irish in his Junior Certificate, equivalent to level A2 in the European Language Portfolio. In his post-test narrative, Table 6.40, Cal demonstrates both a limited lexicon and significant difficulties with basic grammatical structures. Cal's MLP post-test is .88 seconds, position of longer pauses is indicated by underscore.

Table 6.40 Case study

Post-test narrative	Discourse Structure
1. **bhuel** eh déanann mé seacht ábhar well I do 7 subjects	**Topic 1: Subjects**
2. eh Gaeilge **ar ndóigh** Irish of course	1 – 7 Basic listing broken by two DMs.
3. Béarla, Mata, Fraincis, English, Maths, French	
4. eh Fisic Physic	
5. eh **n'fheadar cad eile** I wonder what else	
6. eh Cuntasaíocht Accounting	
7. agus eh Tíreolaíocht (2.29) and Geography	
8. **gan amhras** is maith liom na without doubt I like the	8 – 9 Personal comment on topic
9. cúrsaí pract_ em praicticúla nó mar na ábhair éigeantach	Pause 1.14
pract- practical courses than compulsory subjects	
10. em **n'fheadar cad eile** I wonder what else	10 Filler, hesitation on topic direction
11. eh **chomh maith leis sin** as well as that	**Topic 2: Transition Year, 11 - 30**
12. eh rinne mé an Idirbhliain I did Transition Year	11 DM link to new topic
13. agus ceap mé an bhliain ana- go deas (3.38)	12 Introduces topic
and I thought the year very- nice	13 Evaluation
14. eh **go háirithe** na m_ eh na moth_ na mothúcháin	**Topic 2a: France**
especially the f- the feel- the feelings	14 – 18 Evaluation reason
15. em mar because	
16. bhí mé ag dul go <na> Frainc na eh <ar na> Frainc	
I was going to the France the on the France	
17. agus em and	
18. eh bhí mé ag dul ar na scoil i Frainc (5.99)	
I was going to the school in France	
19. oh **agus rud eile** em and another thing	**Topic 2b: Work-Experience**
20. bhí mé beirt taithí oibre I did two work experience	19 – 29 Evaluation reason
21. eh sa bhliain in the year	
22. em agus is aoibhinn liom sin and I love that	
23. mar bhí mé ag ábalta because I was able-ing	
24. eh nó bhí mé ábalta ag obair or I was able to work	
25. ina e_ chéile le m'athair together with my father	
26. isteach sa siopaí gailf 3.34 in the golf shop	
27. le beirt eh seachtain for *two people weeks	
28. sa dhá seachtain in two weeks	27 - 29 Language error, correction and
29. tá brón orm (4.31) I'm sorry	apology
30. **sin díreach é** (1.18) that's just it	30 Closes topic
31. eh is maith liom eh na Tíreolaíocht I like Geography	**Topic 3: Geography, 31 - 47**
	31 Nominates topic with evaluation
32. mar ceap mé an ábhar eh praicticúla agus	32 – 34 Evaluation reasons
because I think the subject practical and	
33. eh sin suimiúil (1.81) that's interesting	
34. is maith liom mo múinteoir I like my teacher	35 – 39 Unclear if 'nice' refers back to
35. agus em ceap mé <is é> and I think he/it is	teacher or forward to future plans
36. ana- go deas (1.20) very- nice	**Topic 3a: College Plans 35/37 – 46**
37. eh ah agus em (1.63) and	38-42 General point about subjects and
38. ag- eh **cosúil le** na ábhair (1.39) at like those subjects	college.
39. sin	
40. ag staidéar tar éis eh studying after	
41. tar éis na ardscoile (1.19) after the high school	
42.sa bhunscoil in primary school	43 – 46 Personal hopes
43. em agus eh and	
44. eh tá eh tá súil tá súil agam I, I hope	
45. ag staidéar i Coláiste Baile Átha Cliath studying in DCU	
46. i Tír Eolaíocht freisin (1.07) in Geography also	47 Closes narrative

| 47. eh **sin é is dóigh** | that's all I think | |

The lexical range demonstrated in Cal's post-test narrative is very restricted:

- Six verbs used: *déanann, rinne, bhí, tá, ceap, is* 'makes, made, was, is, think'.

- Four multi-word verbal constructions *is maith liom, is aoibhinn liom, tá súil agam, tá brón orm* 'I like, I love, I hope, I'm sorry'.

- Two conjunctions, *agus, mar,* 'and, because'.

- Four adjectives.

- One temporal connector *tar éis,* 'after'.

He has difficulties with basic verb phrases, for example:

- using continuous when the simple was required *bhí mé ag dul.*

- using *I was* form instead of *I did, bhí mé beirt taithí.*

and also with indirect speech: *ceap mé an bhliain, ceap mé an ábhar.*

In addition, he has difficulties with preposition selection and with basic inflections.

These linguistic limitations pose immense challenges for oral production, particular a monologue of two minutes. Cal makes considerable use of targeted NDs in his narrative, a total of eleven. His fluency measures improved, if not dramatically so (MLP from 1.18 to .88, PTR from .56 to .70 and MLR from 4.41 to 5.70). His narrative will now be examined to see if targeted NDs use facilitated delivery of the narrative, in other words, whether they were employed strategically, compensating for linguistic difficulties.

The narrative is on school subjects, with a focus on the students' own subjects. The opening section extends to and includes line 9. This is basically a list, not demanding from a language production perspective. Cal uses the ND *bhuel* to launch his narrative. The benefits of using this ND at this point in the narrative for speaker and listener were outlined in section 6.4.3. The benefits in terms of discourse structure were not mentioned; *bhuel* sets up a frame for the narration, it helps to book-end it. Line 2 also uses a ND. The full phrase, *Gaeilge ar ndóigh,* is also discussed in section 6.4.3; this is a run present in shadowed audio which appears to be fused as a single MWU. It is effective in breaking up the tedium of a list for a listener and relieves the pressure on a speaker in compiling a list. Indeed Cal has learned something of this art; he uses another ND, this time an aside, or self-talk, in line 5. The ND functions to break a list of single word items, while still maintaining the coherency of the discourse run, it is clear Cal is still engaged with supplying this list. The mean length of pause for Cal post-test is .88, on finishing the list there is a 2.29 pause. At this point, Cal has a topic management task: how to proceed. He uses *gan amhras*, 'without doubt', to preface personal assertion, a shift in tone from the quite neutral delivery up to this point. He makes a general comment about his preferences. Linguistically his comment is quite faulty: in

comparing one item to another *is fearr liom* is needed rather than *is maith liom,* and the two items should be grammatically connected with *ná,* 'than'. Cal delivers the two speech runs, lines 8-9, quite smoothly, with a short pause (.28) in between. Being able to set up the two noun phrases together helped communicate his intention, and *gan amhras* marks the topic focus with certainty and confidence. However Cal does not seem to have a direction to take with this topic focus, perhaps unplanned. There is a long pause, broken by Cal recycling *n'fheadar cad eile.* This tells us he is still on task, he needs a moment and may not continue with this line of discussion. Again it is an effective use of the ND, to suspend the discourse from progressing while still holding the floor. After a brief pause, .8 seconds, he launches a new direction.

In fact this is a new topic, a reflection on Transition Year. Cal breezily connects it with the ND *chomh maith leis sin*, which is not semantically appropriate, implying as it does a strong connection with the opening topic. However, it functions in terms of discourse management. It enables Cal to make a topic shift. After making a general point about it being a nice year, there is a very long pause, 3.3 seconds. The hesitations and false start in line 14 suggest he may be trying to express something beyond his linguistic competence. He starts off with a ND, *go háirithe*, 'especially' which gives discourse continuity and indicates a topic focus but he is unsuccessful in articulating this meaningfully. He uses *mar* 'because', to explain why he feels positive about Transition Year but is unable to elaborate further. The longest pause in the narrative, 5.9 seconds, occurs after making this point, end line 18. Cal decides to leave France behind and proceeds to talk about work experience on Transition Year. He manages the shift in line 19 with an appropriate ND, *agus rud eile,* 'and another thing'. He delivers a simple but fairly extended account of his work experience. He finishes with a long pause (4.3 seconds, end line 29) which is given some coherency by his use of a topic completion ND *sin díreach é,* 'that's just it'.

He introduces his third topic, which is a return to the general narrative topic. This is an unexpected return and the return is not managed by Cal. While he makes a number of points, they are all very brief. In the final section he talks about his hopes for college. He seems to be trying to say he would like to take subjects similar to Geography but this is not clear. There is lexical and syntactic breakdown the section 35 – 42, and a series of long pauses testifies to cognitive pressure. Hypothesising in a vague way about future events is beyond his linguistic competence, but in the final section 44 – 46 he rescues the narrative with the FSs, *tá súil agam* 'I hope', *i Coláiste Baile Átha Cliath.* He successfully closes the discussion, and frames the narrative, with the ND *sin é is dóigh.*

Despite the occasional breakdown, despite straying into blind alleys, above all in spite of very limited linguistic resources, Cal succeeds in delivering a narrative that is coherent and has a clear discourse structure. In Section 4.5 we noted similar findings by Hernández (2011) of DMs used 'in order to create cohesive and coherent paragraph-length discourse' (2011:176). Apart from the final section in Cal's narrative, pausing for the most part does not create a disfluent effect. Long pauses generally occur in environments where they might be expected and are contextualised further by appropriate use of NDs.

The improved quality in discourse management is perhaps even clearer in a comparison between pretest and post-test. Cal uses just one targeted ND pretest, and the narrative seems to jump back and forth. There is a sense of pressure to find something else to say running right through, and little available to relieve that pressure. Post-test does not show a marked improvement in linguistic competence but it does show evidence of a communicative strategy being employed to deal with difficulties, one for the most part successfully employed. Cal made effective use of NDs both to help structure his narrative and to deliver it more fluently.

We have already noted the restricted contexts in which Cal, a lower ability student, used NDs. Lower ability students typically use NDs to commence or end turns, or conjoin simple clauses. Of the 10 NDs employed post-test by the two other selected lower ability students, the syntactic environment for each is linguistically simple:

Gaeilge ar ndóigh, 'Irish, of course'

Ar ndóigh is aoibhinn liom, 'of course I love'

Is breá liom a lán spórt eile mar shampla, I love a lot of other sports, for example'

N'fheadar cad eile – sin é is dóigh 'I wonder what else – that's it, I suppose'.

Hypothesis 7 states lower ability students will use targeted NDs to support their spoken narratives but will use a restricted set of these, both in type and quantity. These NDs will generally be employed in linguistically simple environments. A detailed examination of ND use by one student in his complete narrative and an analysis of the linguistic context of use of these NDs, along with summary counts for the other two lower ability students, support this hypothesis.

Hypothesis 8 Higher Ability ND use

Procedures to explore Hypothesis 8 were described above, post-test transcripts of the three higher ability students were examined to identify ND use in such contexts. A total of five instances will be analysed qualitatively.

The challenges posted by indirect speech have been noted in Section 6.4.3, in the discussion of *is dóigh* and *is dócha.* Use by two higher ability students is discussed first.

Example 1

Is dócha gurb é an laethanta saoire is fearr a bhí agam
 'I suppose the best holiday I ever had' (Dan, Post 1)

The syntactic nature of Dan's statement requires use of the copula *is*. Correct copular choice is in itself an indication of competence, particularly in a sentence where a long noun phrase is used in the initial position. For lower ability students, the copular requirement is often further occluded by a reporting clause fronting that statement. This, of course, poses an added task, the use of *is dóigh liom* requires the indirect form of the copular verb, *gur*, and this has to be further inflected because of the vowel following it, *gurb é*. It must be stressed that this is not a particularly erudite construction, and would not mark Dan's Irish as 'book Irish'. Quite the opposite, in fact, and a comparison with the opening of Dan's pretest narrative might illustrate this. He commences: *Is maith liom a lán spórt. Is é cispheil an spórt is fearr liom agus an spórt a imrím*, 'I like a lot of sports. Basketball is my favourite sport and the sport I play (Dan Pre 1). It is the second sentence which demonstrates strong competence here; the copula conjoins not just a verb phrase but also a relative clause with the subject. However, the simple opening sentence, delivered without a ND framing the narrative in some way or softening the assertion, seems somewhat blunt.

Example 2

An interesting example of *is dócha* is provided by Rory.
Is corn rugbaí é sin agus eh is dócha corn [gur]tábhachtach é, 'it's a rugby trophy, and I suppose an important trophy' (Rory Post 29)
Rory uses *is,* as required, in the first part of this sentence. The sentence is conjoined with a phrase also requiring use of *is* the copula. However, in a practice both acceptable and common with NSs, there is copular omission, indicated by the square brackets. This is perhaps predicated on the use of *is* in the almost identical phrase that precedes it.

Agus rud eile, 'and another thing', does not pose the syntactic challenge of reporting verbs and is used effectively and accurately by student of all abilities. The form is on most occasions used as an adjunct at the start of a main clause, *agus rud eile eh téann mise*, 'and other thing, I go' (Cormac Post35). An alternative to this pattern is produced by two higher ability students.

Example 3

David post26-29   *agus ceapaim go bhfuil sé sin an-tábhachtach. Is é an rud, rud eile*
ná eh ná córas polataíochta,
and I think that's important. The other thing is the political system.

Instead of *agus rud eile* being used as an independent clausal adjunct, it is made more forceful by functioning as the subject in a propositional sentence. This fronting requires a syntactically sophisticated structure; a cleft sentence and the use of *ná,* a defective substantive verb. The ND's effectiveness in topic focus is thus enhanced.

Example 4

Rory   post37-38   *agus rudaí mar sin. Eh na rudaí eile a thaitníonn liom le spórt ná*
bíonn tú
and things like that. The other things I love with sport are you're

Rory's use of the ND is similar to David's, fronting a cleft sentence. Rory also inflects the ND, and his repetition of the phrase, indefinite at sentence end and definite at sentence beginning creates a discourse chain.

Finally, *ar aon nós,* anyway,   is another topic management ND, again not challenging syntactically but used by a higher ability student in skilful discourse management.

Example 5

Rory   Post 51-52   *sea eh ar aon nós bhí eh is breá liom spórt agus de gach saghas*
agus is breá liom gach rud atá bainte le spórt
yes, eh, anyway [I?] was eh I love sport and of every kind and I love
everything to do with sport

Rory seems unsure about concluding, the *sea* indicates he has completed talking about the previous topic, a golfer, and he then hesitates. A decision is clearly signalled with *ar aon nós.* Rory uses it to move smoothly from talking about another person to return to the test topic (using another ND, *de gach saghas,* of every kind) and to refer more generally and conclusively to himself.

Hypothesis 8 asserts higher ability students will demonstrate competence in using targeted NDs in linguistically complex environments. We have seen evidence of skilful and subtle management of discourse with NDs in complex contexts. Hypothesis 8 is clearly supported by the examples from higher ability students just considered.

6.6 RQ5: Shadowing and reading fluency

Hypothesis 11: Post-test oral reading of a shadowed text will show fluency gains, established by measures of accuracy, reading rate, pause boundaries and speech runs.

This RQ was added after delivery of Course 1. The present study is interested in speaking fluency; RQs and design of course were developed with this focus in mind. However, observation of shadowing effects on pronunciation led the research to consider assessing the effect of shadowing on a restricted task which could be assessed using quantifiable measures. Students on Course 2 did a pretest oral reading of a text of 78 words, Appendix 6. The oral recording of this text was then shadowed by students during the course, as a standard component of a shadowing activity. In post-testing, students were again recorded reading this text. Files for three students had to be excluded as either pretest or post-test files were corrupted. The remaining ten audio recordings were marked for pause boundaries using Praat and transcribed. The only empirical study investigating shadowing effects on reading fluency which the researcher is aware of employed just one measure, that of words uttered per minute (Zakeri 2014). Speech rate may be considered one indicator of reading fluency but, as the discussion in Section 2.2 has shown, it is preferable generally to consider employing a combination of measures. The researcher decided to employ four measures in total. The following data was collected for pretest and post-test:

1. Length of reading time
2. Number of speech runs
3. Disfluent pause boundaries
4. Errors of various kinds, described in the presentation of evidence.

Complete transcriptions are contained in Volume 2. The small sample made it unfeasible to carry out statistical correlations across these measures. Results for each measure will be presented and analysed separately, results for particular students will be deliberated further, and more conclusive comments will then be made. For all of the measures, a minus figure indicates a fluency gain.

1. Length of reading time

Table 6.41 Total times for oral reading of text
(minus figure = fluency gain)

Reading times in seconds Shadowed reader: 23s, 78 word text			
	Pretest	**Post-test**	**Change**
PJ	34	27	-07
Cal	34	32	-02
Andy	28	24	-04
Ciarán	34	23	-11
Matt	33	30	-03
Niall	29	27	-02
Richard	35	31	-04
Eoin	28	24	-04
Colm	30	28	-02
Fionn	37	33	-04

It was necessary to establish whether a more fluent reading may have been facilitated through the student talking longer to read the text. Table 6.41 shows that in fact the reading time for all students is reduced from pretest to post-test. It was noted in Chapter 2 that articulation or speech rate is just one dimension of fluency. In investigating for proceduralization this measure, following de Jong and Perfetti (2011), was not seen to be relevant. The definition of reading fluency proposed by Kuhn et al. (2010:240) refers to 'appropriate pacing'. The authors remark on a tendency, both in instruction and assessment literature on oral reading fluency, 'to focus on decoding speed at the expense of prosody. This results in students being encouraged to read as fast as possible rather than at a rate that replicates oral language' (Kuhn et al. 2010:240). It is noted that none of the students read in a time faster than the shadowed reader, though one matches that time. A reading rate of 150 wpm is proposed by Kuhn et al. (2010) as a measure of oral reading fluency, counting words read accurately. The text read had 78 words. A number of students did have difficulties with a few words but for most the reading rate pretest is fluent. The difference *between* fastest and slowest is very similar pretest and post-test, 9 and 10 seconds respectively. However there is a range from 2 to 11 seconds in changes across individual students' tests and individual differences will be discussed further.

2. Number of speech runs

Table 6.42 Reading task and speech runs
(minus figure = fluency gain)

Shadowed reader: 8 runs			
Runs	**Pretest**	**Post-test**	**Change**
PJ	11	12	+ 1
Cal	18	15	- 3
Andy	10	7	- 3
Ciarán	19	8	- 9
Matt	16	13	- 3
Niall	9	10	+ 1
Richard	20	9	- 11
Eoin	12	6	- 6
Colm	13	11	- 2
Fionn	24	21	- 3

Speech runs were established using Praat 5.3.18, with the same procedures employed for establishing pause boundaries in general testing, described in Section 5.6. The text could be read coherently, if cautiously, in 11 or 12 runs, as noted in Appendix 6. Using a considerably larger number of runs than the shadowed speaker to read the text may indicate a disfluent reading. There may be a number of factors underlying this, for example a student may have paused more often to read ahead or they may have repeated words or phrases in separate runs. Table 6.41 shows marked variation across students in post-test *and* pretest, as well variation in rate of change. Of course if a student uses a number of runs pretest close to those of the shadowed reader, we would not expect a marked change. Five or six is probable the minimum number or runs a natural reading of the text could be delivered in. Eoin read the text in six runs post-test, but his reading time is just reduced by four seconds and MLP is longer post-test than pretest. The example below illustrates the creation of larger, more meaningful prosodic units:

Ciarán Pretest 2	*is traenáil iontach é*
Ciarán Pretest 3	*mar caithfidh tú a bheith*
Ciarán Pretest 4	*ag do phost in am*
Ciarán Post-test 2	*is traenáil iontach é mar caithfidh tú a bheith ag do phost in am*
	It's great training /because you have to be/ at your job in time.

PJ and Niall both used one extra run post-test and in the same place. PJ paused post-test after the opening DM, *gan amhras,* 'without doubt', and Niall stumbled on the word *amhras.*

Apart from them, figures shows decreases for all students. However, it should be noted that three students still take *more* than 12 runs to read the text, a number it was proposed reflects a coherent but cautious reading.

Conclusions regarding fluency cannot be drawn from this data alone. Affective factors may have come into play for some students, feeling more relaxed or confident post-test. One must not assume that long speech runs are meaningful speech runs, particularly in L2. The next step therefore involves inspection of the linguistic units framed by pause boundaries.

3. Disfluent pause boundaries

Table 6.43 Reading task and disfluent boundaries
(minus figure = fluency gain)

Disfluent Boundaries	Pretest	Post-test	Change
PJ	0	0	0
Cal	6	5	- 1
Andy	1	0	- 1
Ciarán	5	0	- 5
Matt	6	6	0
Niall	1	1	0
Richard	7	2	- 5
Eoin	4	0	- 4
Colm	4	1	- 3
Fionn	10	7	- 3
Totals	**44**	**22**	**-22 50%**

Boundaries were considered disfluent if the pause was phrase internal, *tuigeann/tú,* 'you/understand' or disruptive of utterance meaning. In all, 16 acceptable phrase units were identified, identified in Appendix 6. Some of these could have been broken down into shorter phrases, *agus ní bhíonn tú/ag brath ar do thuismitheoirí* 'and you're not/depending on your parents' but this would have compromised the integrity of the meaning unit. Of course reading with all 16 phrases marked by pause boundaries would compromise the prosodic integrity of the text as a whole. The ability to read larger, meaningful phrase groups is considered a characteristic of fluency development (Rasinski 2013). Repetitions of words, or false starts resulting in pause boundaries were excluded but given consideration for error classification. The example below illustrates a reading with three disfluent runs pre-test and one disfluent run post-test. Square brackets indicate syntactic order in Irish.

Richard Pre 5	*Is traenáil iontach é mar caithfidh*	it's great training because [have]
Richard Pre 6	*tú a bheith ag do phost*	[you] to be at your job
Richard Pre7	*in am agus é*	in time and [it]
Richard Pre 8	*a dhéanamh i gceart*	to do properly
Richard Post 2	*is traenáil iontach é*	it's great training
Richard Post 3	*mar*	because
Richard Post 4	*caithfidh tú a bheith ag do phost in am agus é a dhéanamh i gceart*	
	you have to be at your job in time and to do it right	

The decreases detailed in Table 6.43 clearly suggest that shadowing resulted in students reading with more meaningful pause boundaries, and Table 6.42 establishes that fewer runs were used by most students. Both tables show that students post-test were producing longer runs that were syntactically and semantically coherent.

4. Accuracy

Improvements in speech rate, speech runs and pause boundaries give evidence of fluency gains, but it has to be confirmed students achieved in gains in part through taking less care with language accuracy. Transcriptions were carefully examined for instances of a variety of errors. Errors with pronunciation, inflection, false starts, repetitions, lexical omissions, lexical substitutions and voiced hesitations during speech runs were counted, presented in Table 6.44 and detailed in Appendix 7..

Table 6.44 Reading task and errors

	Mistakes Pretest	**Mistakes Post-test**	**Change**
PJ	8	2	- 6
Cal	15	12	- 3
Andy	2	1	- 1
Ciarán	7	3	- 3
Matt	7	4	- 3
Niall	8	7	- 1
Richard	6	5	- 1
Eoin	1	1	0
Colm	15	13	- 2
Fionn	15	7	- 8
Totals	**84**	**55**	**-29 35%**

Word recognition errors created difficulties with a number of students, in particular the words *post, páirtaimseartha, oibriú*. These difficulties were evident in false starts, repetitions and pronunciation errors. Seven students had difficulties pretest with the word *post* [pʌst], pronouncing it as *póst* [po:st]. This difficulty with a one syllable four letter word was surprising; students may have been reading the word as an English word, which has that shared meaning with Irish. They may have stumbled also because of the accompanying adjective, *páirtaimseartha,* four syllables, beginning with the same consonant, less frequent in use. The impact of one word on the other is clearly evident with Richard's coinage, *postaimseartha* (Richard Pre3).

Many students did not mark initial lenition or eclipses, *do p**h**ost, go **m**bíonn*, *go **g**caithfidh*. More rarely students omitted words, always small function words: *a, é*; and on occasions supplied substitutes, *tugann* instead of *tuigeann, ar fáil* instead of *a fháil*.

Table 6.45 Error counts by category

Inflection		Pronunciation		Repetition		False Start/ Hesitation		Word omission/ substitution	
Pretest	Post	Pretest	Post	Pretest	Post	Pretest	Post	Pretest	Post
16	15	28	12	7	7	21	15	12	9

It should be noted that figures for word omission/substitution do not reveal an overall pattern but relate primarily to one student. Counts for error categories pretest and post-test reveal by far the strongest improvement in pronunciation and can be attested to an effect from shadowing. Figures for errors overall shows a post-test decrease of 35% and improvement in pronunciation made the main contribution to this decrease.

To conclude, the effect of shadowing on reading fluency has been examined using four measures: total time, speech runs, pause boundaries and accuracy. All measures show improvements, though there are variations in improvements across measures and across students. As noted already, the small size of the sample makes statistical correlation unfeasible. Clearly some students (PJ, Andy, Eoin) read fluently across all measures pretest, marked improvement would not have been expected. Though individual differences were not investigated in this task, it is interesting to note the strong contrast in raw data between students who showed strong improvements across all or most measures and those who showed low gains, Table 6.46. Ciarán and Richard got Cs in Junior Certificate Higher Level Irish, while Colm and Cal got Ds in the same exam.

Table 6.46 Comparison in oral reading fluency gains

	Time	Runs	Boundaries	Accuracy	Total
Ciarán	- 2	- 9	- 5	- 3	- 28
Richard	- 4	- 11	- 5	- 1	- 21
Cal	- 2	- 3	- 1	- 3	- 9
Colm	- 2	- 2	- 3	- 2	- 9

The data analysed reveals that delayed oral reading of a shadowed text shows fluency gains for all students, gains established in each of the four measured employed. Hypothesis 11 is thus supported.

6.7 RQ6: Motivational aspects

At the end of the course, students were asked to complete a feedback form, Appendix 8. There is quite a difference in the quality of responses across courses, responses from Course 1 participants are longer and more detailed than those from Course 2 participants. This may in part have been an effect of the different context for form completion. Course 1 participants completed the form while waiting, alone, to do the post-testing. Course 2 participants completed the form as a group in the classroom, and may not have given the question the same degree of consideration as they might have done if alone.

General comments made by participants on their experience of *Bladair* are, by and large, positive. With regard specifically to speaking, participants in both courses noted various benefits:

'helped me a lot, gave me confidence when speaking and guided me when talking about certain topics'
'the useful phrases was the most helpful part…the phrases at the end were very useful and I will always remember them'
'the use of native speakers worked well because it made your ear more acute to the new words'
'helped me with pronunciation'

There are some interesting differences across courses in comments made. In Chapter 4 we saw that the overall structure of the courses differed fundamentally. Course 1 employed a much greater range of activities and more interaction. Course 2 employed repetition of two main activities, shadowing and 4/3/2. Enjoyment of the course was mentioned by just one (n=9) Course 2 participants while five (n=15) Course 1 participants mention enjoyment or fun:

'I enjoyed the course'
'I think the course was great fun'

'I enjoyed the course and I enjoyed all the fun activities'
'Was a funnier, more engaging way to develop spoken Irish than standard way done in class'
'I enjoyed the course'.

On the other hand, Course 2 had difficulty with the intensive and repetitive nature of a core activity, shadowing:

'Longer pieces, and fewer of them, would be better for the shadowing.'
'A lot of the shadowing was unnecessary.'
'I think the classroom talks were very good, however I feel the shadowing was less beneficial.'
'I thought shadowing became too hard to continue to do. Too hard to keep concentration.'

They enjoyed the interactive nature of 4/3/2 more, 'I think the classroom talks were very good', and advised 'focus more on conversation circle'.

Course 1 participants made some quite specific criticisms and recommendations.

'Some of the activities were good but it depends on the mood you are in.'
'Certain aspects of the course were a little complicated and I felt that missing one lesson lead to [a] knock-on effect and left the student somewhat lost.'
'Play more group activity games with only spoken Irish.'
'It would be better if everyone there was there to learn and not there to miss study.'
'A handout at the end with everything on it would be useful.'
'To have more spoken Irish conversations with the teacher for feedback if possible.'

More Course 1 participants were happy to recommend the course.

'[I]found the innovative ways of teaching effecting (sic) and refreshing.'
'I think Irish in school should be taught similarly to the way this course was taught.'
'I still found it difficult but I much prefer it to normal classroom Irish.'
'I think speaking courses should be more common.'

In addition to feedback on completion of course, midway through Course 2 the researcher met with participants to explore their experience of shadowing, nine in total were able to attend this meeting. A variety of views were expressed. Cal commented on unfamiliar pronunciation, 'well it was good for pronunciation but…some words were different to the way you were used to pronouncing them. So like last night it was 'ar ndóigh', instead it was pronounced 'ar ndó', and Niall added, 'instead of 'iontach' he said 'oontach'. Interesting observations on fluency were made by some. Cal noted '[with] the sounds it gives you kind of a flow, more than kind of just saying words... there's more of a fluency to it,' Eoin also talked about a fluency benefit from shadowing, 'it helps you speak fluently, even though you're not actually making up what's you're saying.' This, in fact, is one of the principles underpinning the 4/3/2 activity, the task of narrative construction is basically resolved after the first delivery.

Quite an animated discussion developed around shadowing. Garreth was not at all convinced about its benefits. He felt shadowing only developed skill in memorization and speech rate, and added, 'I think it's unnatural if you're trying to keep up with them, you should be saying it at your own pace.' Garreth's main criticism concerned what he saw as the inauthentic nature of the technique. He argued that 'just speaking Irish improves it' and that the 4/3/2 follow-on classes were 'much more beneficial'. Niall added 'it was good to kind of get Irish in your head but it was just more memory than getting better at speaking it'.

There was general support for the benefit of the 4/3/2 activity but others felt that shadowing was still important, one quite strongly so:

> I thought it was good because it kind of gave you an ear for it and then it helped you in the class cos you had been talking, listening and that on the topics and you were able to use stuff from shadowing in the classroom, I thought it was helpful anyway (Matt).

Interestingly, a number of students talked about how they had developed their own approaches to shadowing. For example, Ross said, 'I'd pay more attention to the sound [of the shadowed speaker whereas before...I would have just left it out and then I'd have been thinking more about the sentence that was coming'. Likewise Cal said 'I thought if I stayed behind I'd kind of lose it so I stayed as close as possible [to the shadowed speaker]'. Part of the rationale for Course 2 was to provide students with the opportunity to develop competence in the use of certain techniques. Feedback suggests this process was happening, with some students describing how their approach changed over time, both through individual 'trial and error' approaches and a developing understanding of both technique and technique objectives.

In summary, overall feedback from the participants was both encouraging and insightful. Course 1 participants benefited from the range of activities which involved active exploration of aspects of speaking, resulting in a heightened awareness of speaking as a distinct skill. In general, they are more positive about course relevance and their enjoyment of it. While post-test data demonstrates greater fluency gains for Course 2, the intense and repetitive nature of the activity was clearly demanding for students. The solitary aspect of it made it less enjoyable for some, in particular for students who enjoy interactional activities. In conclusion, intensive and repetitive approaches may be demotivating for some students. The benefit of such activities may be enhanced by integration into a more balanced and diverse programme.

Implications arising from the participants' experiences with *Bladair* are commented on further in Chapter 7. This research study did not explore attitude and motivation due to

practical considerations. This is of some regret. Important considerations arise even from this somewhat rudimentary feedback for the development of longer programmes for the classroom. A more systematic and comprehensive surveying of participants' attitudes and motivation pre-course and on course completion is warranted. In Chapter 1 we noted the complex attitudes held by students, and more generally, towards the Irish language. It is important that new pedagogical initiatives and approaches are evaluated with regard to the students' own experience of such initiatives and of their effectiveness. It is also imported they are evaluated with regard to the effects new approaches might have on students' motivation, attitude to the language, and sense of self as an L2 speaker of the language.

6.8 Conclusion

In this chapter the six research questions and eleven hypotheses presented in Chapter 5 have been addressed. Data relevant to each hypothesis was presented, analysed and conclusions drawn. All of the hypotheses were supported apart from Hypothesis 8, 'Higher ability students will both employ more NDs and use a greater range of these than lower ability students'. It was also noted that Hypothesis 5, 'There will be evidence of greater use of FSs, other than targeted NDs, by students' was not strongly supported.

A more general discussion of these conclusions and implications follows in Chapter 7. The benefits, challenges and limitations of the research design will also be addressed in the coming chapter.

Chapter 7 Conclusions and Recommendations

7.1 Introduction

This chapter reviews the present study. The background to the study, both the learning context and guiding theoretical constructs, are briefly presented. Central aspects of course design are then summarised. This is followed by a more detailed discussion of the main conclusions arising from the data analysis conducted in Chapter 6. Limitations of the research design are acknowledged. Chapter 7 concludes with recommendations for further research in the field of study.

7.2 Background to study

The experience of the second-level learner and various aspects of the teaching of Irish informed much of the discussion in Chapter 1. This discussion was presented in the context of an important change made to marking in the Leaving Certificate Irish exam, a change which foregrounds competence in spoken Irish. From the perspectives of learner and teacher, this change poses challenges.

The term, 'associated language' (O'Rourke 2005) was seen to aptly describe the attitude of many towards the Irish language, where the language is given superficial symbolic importance but is rarely used. Young people typically lack confidence in the language and have few opportunities to use it. The classroom situation, the training of teachers and the limited availability of appropriate materials also pose challenges in fostering students' competence in speaking. It was noted in Chapter 2 that fluency is frequently associated with an ease in speaking. Whether for basic utilitarian ends of exam preparation, or with the broader aim of developing confidence and enjoyment in using the language, ease of production seemed a worthwhile objective, but one requiring a focused and informed approach.

It was considered appropriate, therefore, to turn to research both in general skill acquisition and in spoken language development which might help to inform the development of a programme of instruction. The field of formulaic language and the concept of automaticity appeared particularly germane. Research on the cognitive construct of automaticity and the contribution of formulaic language to spoken fluency provide the theoretical framework for the present study. In Chapter 2 a detailed examination was carried out on automaticity, seen to be critical to skill acquisition. Particular attention was given to some mechanisms considered to prompt automaticity, those of proceduralization and chunking. The importance of phonological short-term memory was highlighted in language acquisition. Studies indicate

that through rehearsal PSTM has a pivotal role in the development of stable linguistic representations of linguistic chunks, particular in the early stages of language acquisition and of language learning.

Turning to a consideration of language in use, evidence for the contribution of formulaic language to language fluency was presented. This evidence supports an argument for the development of pedagogical approaches designed to prompt formulaic language acquisition. The notion of *formulaic sequences,* as understood by Wray (2000) is favoured within the present study as it draws attention to the distinct lexical status of formulaic language, 'stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar' (Wray 2000:465). The manner of storage and production thus described is similar to the constructs of chunking and automaticity as discussed.

Having established a pressing need for the development of a spoken fluency course designed for learners of Irish at second-level, the next step involved locating instructional design in the relevant literature. The framework within which the present study is located brings together research from a number of disciplines:

Corpus linguistics   - language in use, spoken language, conversation, formulaicity
Psycholinguistics   - proceduralization and automaticity in articulatory processes
Cognitive linguistics   - chunking, automaticity
Skill acquisition   - automaticity, proceduralization, practice and repetition
Applied linguistics   - aspects of spoken fluency, L2 fluency development

Informed in the main by the current literature on automaticity and formulaic language, a unit of instruction was designed, *Bladair*. In fact, two versions of *Bladair* were developed and delivered to two separate groups in order to compare the effects of extensive and intensive treatments.

7.3 Course design

A ten hour course was developed for students taking Leaving Certificate Irish at Higher Level. This was piloted, leading to minor modifications of course materials and a more substantial change to test design, discussed in Section 5.9. Key aspects of the course design are reviewed here.

It was proposed in Section 3.8 and again in Section 4.5 that a programme designed to foster acquisition of formulaic sequences (FSs) should aim to develop students' competence in at

least one of the following aspects of FSs while giving due cognisance to all:

1. The phonological coherence of FSs: stress, intonation, tempo, pause boundaries.

2. The functional and contextualised use of FSs: interactional, discourse and pragmatic; preserving the semantic prosody of FSs.

3. Flexibility of FS use: incorporating FSs into free conversation, developing the ability to mix formulaic with novel, developing the ability to modify FS appropriately.

4. The automatic use of FSs: producing FSs non-analytically and using them in a fluent manner.

Repetition and memorisation processes were given a pivotal role in the course design, and shadowing and 4/3/2 activities adopted accordingly. The underlying acquisition route being prompted, one seen to foster proceduralization, was that of awareness, practice and production. As already mentioned, it was decided to locate these proceduralization activities within two contrasting courses, one extensive and varied, and the other intensive and restricted. To various degrees in both courses and within individual classes, *Bladair* gave attention to all of the above aspects, an issue returned to in Section 7.5.

Apart from encouraging a general awareness of chunking in speech production, the course also targeted a range of FSs. The most sustained attention was given to a set of selected narrative devices, as discussed in Section 4.8. In addition, a selection of FSs present in the shadowed audio was enhanced and Course 1 also involved work with two sentence builders.

7.4 Findings and implications

This discussion in guided by the six research questions (RQs) addressed in the present study and presents a summary of the discussion and main findings in Chapter 6, along with potential implications for research or pedagogical practice.

7.4.1 RQ1 Fluency and proceduralization

RQ1: Will fluency gains attested after participation in the programme, *Bladair* indicate proceduralization of linguistic knowledge has taken place?

Measures presented in Chapter 5 give evidence that is statistically significant for fluency gains in both courses and indicate that these gains reflect a process of proceduralization. While overall increases in speech runs were not significant, fluency patterns showed students spoke more and paused less during post-tests. Furthermore, these gains were stronger for Course 2, it is claimed these stronger gains arise as a result of the more intensive engagement with a more restricted set of activities, allowing students more practice time and

opportunities to develop competence in the techniques themselves. Apart from temporal measures, qualitative analysis is presented in response to RQ2 which also gives support to this claim.

Possible reasons why there was no significant change in MLR were mooted in Section 6.2 but these are, as noted, conjectural. Notwithstanding such factors, it is important to acknowledge that improvement in MLR is generally contended to be an important aspect of speech fluency (Dörnyei & Kormos 2004). Procedures employed in *Bladair* clearly were not successful in developing this aspect, a finding which is addressed further in the discussion on research limitations.

7.4.2 RQ2 Proceduralization and FSs

RQ2:   Where there is evidence of proceduralization, is this related to the use of targeted formulaic sequences, untargeted formulaic sequences or both?

Addressing this RQ entailed extensive qualitative and quantitative analysis of targeted and nontargeted FSs. This analysis is based on the premise that for FSs to contribute to fluency gains which indicate proceduralization, the FSs themselves need to be produced and employed in a manner that suggests they have been proceduralized. Tests were therefore examined carefully for evidence that are retrieved and produced holistically, rather than analytically, and that their production is accurate and apt. Instances of use were given contextual examination, articulatory examination and counts were taken. In the case of targeted NDs, the use of these NDs to support fluency, whether in discourse management or as a communicative strategy was also examined.

Comprehensive examination of these establishes that nontargeted NDs did not contribute to fluency gains, that FSs in shadowed audio made a marginal contribution and that the contribution of more general FS use was modest. On the other hand, there is persuasive evidence that targeted NDs made a significant contribution to fluency gains that arose. These results were as expected. It is not surprising that targeting particular lexical items for fluency treatment would result in some at least of these items contributing to fluency gains. In fact, the majority of the NDs used were used purposively within a discourse. It is interesting, however, to consider the fact that a number of NDs were underused (only NDs which were used at least five times across courses were selected for analysis) or not used at all. A total of 15 fell into these categories, close to half of the 33 targeted NDs. These 15 are listed in Table 7.1.

Table 7.1 Targeted NDs not used or with low usage post-test

Not used		Low usage (less than 5 times)	
Mar a déarfá	'as you would say'	*Nach ea*	'isn't that so'
An dtuigeann tú	'do you understand'	*An bhfuil a fhios agat*	'do you know'
Cineál	'kind of'	*D'fhéadfá a rá*	'you could say'
N'fheadar	'I wonder, I suppose'	*Gan amhras*	'without doubt'
Abair	'let's say'	*Cinnte*	'certainly, for sure'
Táim ag ceapadh	'I'd imagine'	*Cur i gcás*	'consider, for example'
Déarfainn	'I'd say'	*Sin a bhfuil*	'that's it'
Is cosúil	'it seems'	*Seo mar atá sé*	'that's how it is'

The first two and first three NDs listed respectively in the 'Not used' and 'Low usage' columns might be classified as listener-directed. The low use of these NDs might be a factor of testing procedures, where students did not have a conversational partner. It might also reflect the fact that students don't typically have much conversational experience. However these NDs may also be used primarily as fillers, as is frequently the case with the use of *you know* in English. It is quite possible that participants' low usage of the NDs in question reflects a more literal understanding of their discourse function. This is perhaps not altogether surprising if one considers the limited treatment of conversational discourse in the standard textbook.

The remainder of the NDs in Table 7.1 function primarily for assertion, topic illustration or topic completion. As suggested in Chapter 6, it is possible some of these items were competing with equivalent NDs more frequently met in the classroom, or other targeted NDs similar in meaning. In such cases, the familiar unsurprisingly was selected over the less familiar, *sin é,* for example, over *sin a bhfuil,* 'that's it', *mar shampla,* 'for example', over *cur i gcás,* 'take for example'.

Some of the NDs in Table 7.1 might have needed more focused treatment and input enhancement in order to enhance saliency of the NDs and to develop confidence in use where the ND might not be so frequently met or may have a more subtle range of meaning. *N'fheadar,* for example, can mean *I don't know, I wonder, I suppose, maybe, I wouldn't say so,* the precise meaning in the main determined by intonation. The degree of variation and the fact that intonation plays a central role in establishing meaning, may have posed challenges for some students. Also, once again, the ND is not one they would typically meet in standard textbooks, while relevant corpora is not available to support the claim, it is suggested that *n'fheadar,* similar to *I dunno,* is more characteristic of spoken discourse than written.

In the contextual analysis of *saghas,* 'kind of', it was noted that 'evidence clearly indicates that *saghas*, while potentially of value, is prone to somewhat promiscuous and idiosyncratic use'. In the case of this ND, competition was not a factor – the equivalent targeted ND, *cineál,* was not used at all. Fillers and modifiers overall accounted for just 18% of total ND use and there is clearly a need to give greater attention and consideration to instruction and practice activities in order to enhance awareness of the fluency benefit and discourse functions of such NDs, as well as confidence and competence in their use. Regular reviews with students as to their understanding of NDs, in particular lesser-used ones, may contribute to greater confidence and competence.

It was noted in Chapter 6 that neither of the two sentence builders targeted in Course 1, *an rud ba mhó ná,* 'the main thing was', and *d'éirigh liom – a – ,* 'I managed to – ', were used by participants. In hindsight, this is not altogether surprising. Each sentence builder was explored and practised in just one class. Both sentence builders entail syntactic embedding and have strong discourse meaning. Hence they demand a reasonable level of language proficiency to use aptly and accurately. It is likely that much more practice was required to develop familiarity with their use and to consolidate the items for participants.

7.4.3 RQ3 Fluency and accuracy

RQ3: Do fluency gains come at the expense of accuracy?

In Chapter 3 we met arguments that fluency gains may be accompanied by loss of linguistic control. On the other hand, we also met claims that use of FSs can have benefits for linguistic accuracy, as well as fluency. To address this question, pretest and post-test scripts for nine participants, randomly selected, were closely examined for types and frequency of errors. Comparisons showed only one student made more significantly more errors post-test and it transpired that particular student had made very marginal fluency gains.

Given that no more than three weeks separated pretest and post-tests, it is perhaps not surprising that marked changes in accuracy were not demonstrated, either in terms of improvement or disimprovement. In Section 2.2 studies in CAF (complexity, accuracy, fluency) were discussed which suggest that longitudinal research would be likely to reveal more about the nature of the interrelationship between the three areas over time, this suggestion is returned to when recommendations for further research are considered.

7.4.4 RQ4 Competence levels and targeted ND use

RQ4: Does use of targeted NDs reflect the competence levels of students?

This question was also prompted by CAF research. We noted in Chapter 2 Skehan's suggestion, for example 'that fluency can be accompanied by either accuracy or complexity, but not both' (2009:512). Both qualitative and quantitative research was employed to address this question. While there was no evidence of differences across proficiency levels with regard to range or numbers of NDs, it must be stressed that the sample size of six students is very small, for reasons given in Section 6.5. The case study analysis of a lower ability student's post-test provided convincing evidence that the student employed the NDs primarily for simple discourse management purposes but also as a compensatory strategy to fill pauses, provide planning time or to extricate himself from a problem in narrative delivery.

Turning to the higher ability students, five examples of targeted NDs in linguistically complex environments were considered. Evidence was presented of students using the NDs skilfully to front indirect forms of the copular verb *is* and to manage topic focus in cleft sentences, and of other NDs which can be used as adjuncts being syntactically embedded. These examples demonstrate the skilful and effective use of targeted NDs in linguistically complex environments, and can be seen as a reflection of the students' competence levels.

The evidence presented in Chapter 6 indicates that instruction in NDs tailored to reflect competence levels and demands may be relevant. For example, while both high ability and low ability students made successful use of NDs, in Chapter 6 we noted some students had difficulties in using NDs expressing assertion. Instruction in *Bladair* did not distinguish between these groups but in Section 7.6 some suggestions are made on this matter.

7.4.5 RQ5 Shadowing and reading fluency

RQ5: Does shadowing a spoken text result in fluency gains for the student in an oral reading of this text?

It was noted in Chapter 6 that the researcher had not initially intended to investigate reading fluency but was prompted to do so based on first-hand observation of shadowing effects on pronunciation in Course 1. Post-test reading showed marked improvement in number of runs, pause boundaries and error rate, gains of 73%, 50% and 22% respectively. The positive results appear to warrant attention and further research. In particular, closer examination of prosodic and phonetic changes would be of interest. Ratings by listeners could be used to track articulation changes.

Nye and Fowler (2003) found evidence of shadowing latency decline occurring with increased phonetic familiarity of shadowed sequences. In a related experiment, they found evidence that unfamiliar phonetic sequences were imitated more closely than more frequent, and more familiar, phonetic sequences. The authors propose these effects may be conditioned by the nature of lexical memory and access to it. In what they describe as conventional accounts of lexical memory as a memory of abstract word types, listeners can identify frequently used words early in its production and may not attend to the final part of that word as spoken. Nye and Fowler also state their findings can be understood by accounts of lexical memory as an exemplar memory system, where 'words are stored, not as abstract types, but as individual tokens that listeners have experienced' (2003:76). With increased activation, a representation is formed where 'features that are consistent across the activated traces are amplified whereas those that are inconsistent cancel each other out' (2003:76). This representation is termed an 'echo'. They refer to Goldfinger's argument (1998) that, on hearing a low frequency word, few exemplars are activated. Consequently 'the shadowed response is guided by an echo on which the input word has had a large impact' (2003:76). Imitation of low frequency words is therefore more precise. The authors conclude both accounts, and their own findings, confirm lexical memory mediates in the imitation of speech.

These findings appear to accord with the proposal made by Baddeley, noted in Section 2.4.3 that the role of the phonological loop in acquiring new vocabulary items 'appears to be particularly significant when the novel phonological forms to be learned have *highly unfamiliar sound structures'* (1998:164, emphasis added). The research carried out by Ney and Fowler (2003) is on L1, similar research on L2 could contribute to our knowledge of lexical storage and retrieval of sequences by learners.

7.4.6 RQ6 Intensive techniques and the classroom

RQ6: Is an intensive approach to fostering fluency appropriate for the L2 classroom?

Course 1 employs a greater variety of activities and a strong interactional component. Course 2 is more restricted and repetitive, four classes of the ten involved students working independently at a computer. Feedback from students, rudimentary as is it, gives a clear indication that Course 1 was more enjoyable for students and helped develop a stronger awareness of speaking as a distinct skill. Some Course 2 participants found the repetitive nature of shadowing demanding, and questioned the value in making extensive use the technique while others were more positive about its value.

It was suggested in Chapter 6 that intensive and repetitive activities might be more usefully employed when integrated in a programme with a strong interactional component and diversity of activities. *Bladair,* both Course 1 and 2, is a short fluency programme. A longer programme clearly presents more scope and opportunity to incorporate a greater variety of practice opportunities, and to explore ways of adapting shadowing for incorporation with interactional activities. These issues are explored further in considering recommendations arising from this study.

7.4.7 Summary of findings
Fluency gains made by participants were contributed to by the use of many of the targeted NDs. Quantitative measures suggest a proceduralization effect, this is further supported by inspection and contextual analysis of NDs employed post-test. These gains did not come at the expense of linguistic accuracy. Higher ability and lower ability students demonstrate use of NDs which reflects diverse competence levels. The shadowing technique demonstrates strong benefits for reading fluency. On the other hand, shadowing is an intensive technique. Some students clearly did not enjoy the repetitive use of the technique, with some questioning the value in doing so.

Findings overall are positive for the benefit of a fluency programme focused on proceduralization and suggest the development of such programmes might have an important role in the L2 classroom, particularly where the L2 is a minority language. These findings are in accord with conclusions drawn by Meunier from a review of instruction in formulaic language, 'the promotion of communicative competence, fluency, and accuracy in L2 can be achieved through the use of activities that are not communicative in essence' (Meunier 2012:122), among such activities she mentions shadowing. However, many questions have been raised in the course of Chapter 6 about aspects of these fluency gains, about participants' use of targeted NDs, about the low use of some targeted NDs and of FSs more generally. The implications of these findings will be considered further in the next two sections.

7.5 Implications for pedagogy
While the primary research objective is an investigation into the effectiveness of a particular focus and approach on oral fluency, *Bladair* was designed for delivery in the classroom. As noted above, findings overall are encouraging with regard to the potential benefit of such an approach in the classroom. Indeed, it has been argued in this study that in view of the limited contact learners have with Irish speakers, this classroom focus may be particularly relevant. It is worthwhile in this context reviewing some of the implications from a pedagogical

perspective with regard to some of the findings already presented. Of necessity, this discussion is brief and does not address important questions such as the role of feedback, already alluded to. The discussion is guided by twin planks of the current study, a concern with the development of lexical resources (the *spoken* language lexicon) and with development of the ability to use these resources (aptly, accurately and with ease).

7.5.1 Methodologies

While noting the importance of motivation and other factors, Rossiter et al. claim that 'instruction remains a key element in promoting ultimate fluency' (2010:586). *Bladair* was introduced to participants as a *gearrchúrsa i labhairt na teanga,* a 'short course in speaking'. The course integrated explicit teaching of oral fluency with extensive practice activities. Both aspects were important and complementary but in *Bladair* explicit teaching was restricted mainly to targeted NDs and awareness of chunking in speech. The pilot study incorporated in addition a focus on narrative structuring but it was found doing so compromised the already limited opportunities for practice. Both Courses 1 and 2 involved noticing and awareness techniques, such as font enhancement, gap-fill activities and classification activities. A range of practice activities was provided in Course 1, including quizzes, 4/3/2 exercises, chat circle, mingle jigsaw and shadowing; Course 2 employed mainly the shadowing and 4/3/2 procedures. Many of the activities were designed to prompt chunk memorisation in participants.

Activities are tools to foster learning. In themselves, they can be engaging and enjoyable for students, they can have intrinsic motivational and interactional value. But for a language learning objective to be targeted, whether that of managing turn taking or of developing competence in making requests, the activity needs to be grounded in a methodology, an approach which in turn is derived from established theoretical principles. Teachers, in addition, need to have a broad appreciation of the methodological basis for the activity in question. To know, for instance, that a mingle jigsaw activity can be used effectively to enhance chunking processes because of the repetition entailed and to know there is a basis for this work in our understanding of phonological memory, means teachers are more likely to appreciate the importance of students speaking their individual 'jigsaw run' to the teacher initially to ensure the student has accurate pronunciation and appropriate intonation contour. It is essential also for teachers to have an awareness of how activities, which might be seen to be diverse and autonomous, are given coherence within a programme underpinned by complementary methodological principles. An example of this is to be found in the illustration of proceduralization principles underpinning activities in *Bladair* presented in Table 4.7.

Memorisation and repetition activities have long been regarded as inconsistent with a communicative approach to language learning and may need to be reclaimed for teachers. Cognitive and language learning research presented in the course of the present study make a compelling argument for the benefit of memorisation and repetition but teachers need more than a green light; for research findings to make their way into regular classroom practice they have to be translated into programmes, materials, curricular descriptions and assessment procedures.

7.5.2 Materials

Referring to the current position of the Irish language in Ireland, Uí Dhonnchadha et al. (2012) state 'sociolinguistic conditions mean that a comprehensive spoken corpus has a vital role to play in promoting and preserving the spoken language' (2012:para 3). The availability of a range of appropriate audio resources is certainly a pressing challenge for the development of speaking courses in Irish. At present students generally work with scripted recordings accompanying textbooks, the limitations of which were discussed in Chapter 1. Not having a corpus of spoken language accessible to students also restricts the opportunities for students to engage in their own exploration of features of the spoken language, to examine collocational patterns or identify interactional routines. Addressing the difficulty presented by NDs which do not translate readily from L1 to L2 is one example of the possible benefit of corpora work. Such work can assist students in developing an understanding of the semantic range, the discourse and pragmatic register and functions of NDs like *is dóigh liom,* 'I think, I'd say, I'm of the opinion, probably, I suppose'. In Chapter 6 it was noted that students tended to opt for NDs which had close semantic equivalence to L1 NDs, suggesting an uncertainty about the ability to use other, perhaps more frequently used, options.

The availability of corpora could also be of immense values to designers of materials. Martinez and Schmitt (2012), for instance, describe their selection of a range of criteria from formulaic language research, used to extract a 'phrasal expressions list' that would support pedagogic treatment. Such a list might highlight frequently used FSs that lack saliency in existing textbooks and were noted in Chapter 6 for their absence in participants' test narratives.

Apart from the general issue of such resources, there is also a need for instruction to give attention to potential areas of difficulty in fluency development. Boers and Lindstromberg (2012:102) query whether highly inflectional languages may 'require a formula-oriented pedagogy with a greater focus on form'. Evidence presented in Chapter 6 indicates that

lower ability students had syntactic difficulties in employing reporting phrases or phrases of assertion. When used at the beginning of a sentence utterance, phrases such as *is dócha, is dóigh liom,* 'I think, I suppose' are followed by the dependent form of verbs, which is generally marked by lenition or eclipses and by the use of a special dependent form of the very in some cases. Thus, for example, the phrase <u>*tá*</u> *sé suimiúil,* 'it is interesting', when fronted by a reporting phrase is modified, *is dóigh liom* <u>*go bhfuil*</u> *sé suimiúil,* 'I think it is interesting'. In *Bladair* this modification was not highlighted.

In Section 3.7 we noted a suggestion by O'Keeffe et al. that '[I]t is perhaps more helpful to see… grammatically incomplete strings as "frames" to which new, unpredictable content can be attached' (2007:71). An approach might be to focus on a restricted set of frequently used verb phrases. The copular verbs, for instance, were difficult for some students to use when fronted. The challenge is two-fold, selecting the required copula and then modifying it accurately. These verb phrases could be focused on separately. Initially, students might target the verb *bí,* and developing competence in the sure and ready use of derived verb phrases in different tenses such as *b'fhéidir nach bhfuil sé, is dóigh liom go mbeidh sé,* 'maybe it isn't…I'd say it will be', before giving attention in another class to verb phrases derived from the verb, *is*.

Approaches could also give regard to competence levels. Returning to the issue of reporting phrase, activity design could prompt students with lower competence levels to employ reporting phrase at the *end* of statements rather than fronting them, thus avoiding syntactic embedding. Students thus could give attention to using the phrases without also having to give attention to grammatical use, a focus which might inhibit and conflict with the fluency effect of the phrases. More proficient students, on the other hand, could engage in practice with the use of reporting phrases in initial or internal positions.

Appropriate materials and activities highlighting issues of linguistic form and context, and prompting acquisition of such NDs and of FS use more generally, need to be developed. Textbooks play an important part in the Irish classroom, and in Chapter 1 a standard textbook approach to preparation for the oral exam was illustrated. Jones and Haywood (2004) detail three reasons why vocabulary reference pages of that kind are not helpful in acquisition of FSs: too many items with too few examples, too many discrete lexical items, with too few phrases, and little information regarding frequency of these items. It is essential that textbooks facilitate both teachers and students in this process by presenting a range of appropriate linguistic input, both audio and written, *and* a comprehensive set of activities carefully selected and developed to target acquisition in a specific aspect of spoken language.

7.5.3 Curriculum

As a research study, the focus of *Bladair* was of necessity restricted. A programme on more general speaking fluency requires the specification of a curriculum to provide the coherence of a broad framework and to support systematicity in pedagogical approaches. Bygate (2009) outlines two responses which have emerged in developing a speaking curriculum. One he terms 'global', curriculum organised around project, theme or topic. The other approach is closer to a skills-based approach. Surveying the diversity of proposals within both approaches, he highlights the need to find appropriate organizational and structuring devices; whether linear, cyclical, hierarchical or other.

Speaking involves talking, talking appropriately in context, and managing that talk. A distinction that might usefully guide curriculum specification is that of the microskills involved in speech production and speech performance, referred to in Section 3.6 and illustrated in Appendices 1 and 9. A full, communicative account of spoken language should be informed by discourse and pragmatic perspectives. Apart from descriptors such as those provided by the CEFR for speaking competencies, discussed further in the section below, descriptions of spoken grammar would be useful in this regard. Making reference to taxonomies of features such as that provided by Carter & McCarthy (2006), briefly summarised in Section 3.2, can ensure there is a focus on the distinctive qualities of spoken language and to identify areas for targeted instruction. In the same section we noted the need to specify for interactional competence. The development of appropriate communicative strategies, particularly important because of the on-line production demands entailed in most speaking acts, should accompany instruction in speaking.

Rossiter et al. (2010) present activities that could be used to help foster competence in FSs such as gambits and discourse markers, and also in the development of communication strategies such as circumlocution and use of interactional fillers. Indeed, there is a vast literature describing methodologies and activities designed to improve spoken fluency. The extensive and diverse nature of this material makes the requirement for curricular development even more urgent, incorporating a comprehensive description of features specific to the spoken language in question. Of course, taxonomies and descriptions are of limited value in the classroom. Language teachers need, in addition, to have an understanding of acquisition stages and routes, and curriculum should incorporate suggestions with regard to structuring and sequencing of activities. Curriculum also needs to specify the features which can discriminate proficiency, including interactional proficiency. Bygate, after outlining the areas curricular development in speaking needs to address, highlights the challenge in specifying for proficiency, '[I]t is one thing to construct a range of

activity types, and to be able to rank them in order of complexity; it is another to be able to bring together the features of speech in ways that act as indices of speaker proficiency' (Bygate 2009:429).

7.5.4 Assessment

It is possible that the 'washback' argument, that testing directly impacts on pedagogic practice, contributed to the changes in mark allocation in the Leaving Certificate Irish exam described in Chapter 1. Certainly there is a more pressing need to attend to developing competence in spoken Irish in the classroom but there is also a danger that developing spoken competence may be restricted to competence in exam performance. The rather sudden nature of the introduction of these changes, however, has meant that there is a lag between the exam and availability of appropriate materials, resources, curricular description. That gap can all too easily be filled by textbooks basically adapting 'tried and tested' approaches used to develop written competence (providing sample essays, long lists of general phrases and topic specific items) to speaking. Initiatives taken by the SLSS were noted in Chapter 1, there are also some interesting online resources emerging such as *cuireadh chun cainte,* 'Invitation to talk'. However, the focus of *cuireadh chun cainte*, and of many other resources, is preparation specific to the demands presented by the various task components of the oral exam, not the more general development of speaking skills.

Implementing a practice of continuous assessment of spoken competence as part of a general programme on speaking skills might help to counter the limitations of a focus on a terminal exam. It could certainly enhance both teachers' and students' awareness that 'spoken language is not simply language spoken' (Bygate 2009:429). Assessment needs to give consideration to the various aspects of communicative competencies, to the criteria used to measure performance and to manner of assessment. The Council of Europe (2001) provides in the CEFR scales and descriptors for language competences that are richly detailed across a range of communicative skills, tasks and contexts. The Framework is designed to support learning, teaching and assessment. While progress is typically seen as linear, the Framework recognises that progress for learners may also be lateral, for example 'by broadening their performance capabilities rather than increasing their proficiency in terms of the same category' (Council of Europe 2001:17). The Framework can be used both to specify content of tests and 'to establish criteria for the attainment of a learning objective' (2001:19). Appendix 9 shows the descriptors for qualitative aspects of spoken language use and illustrates the horizontal and vertical dimensions of the CEFR. The horizontal dimensions detailed for spoken language use are range, accuracy, fluency, interaction, coherence. Distinguishing these dimensions in itself is clearly of benefit for the learner in developing a

more complete understanding of competence in speaking but also is useful in guiding assessment procedures.

The CEFR can be employed in both teacher-assessment and self-assessment, and for both continuous and summative assessment. Bygate (2009) notes the possibility of student transcribing their own conversations, such an activity certainly presents interesting possibilities for self-assessment, with a focus on fluency as well as accuracy. Specific forms of assessment are not prescribed but performance and task specifications can be drawn from the descriptors. The CEFR is designed with an adult learner in mind and needs to be adapted for the young learner.

7.6 Limitations of research

1. One of the main limitations of the present study relates to the small sample size. In total, data for twenty seven participants is considered. It is difficult, therefore, to make claims regard the degree to which results may be generalized to other populations. As there were no females in the sample group, a similar size study might usefully involve comparative research, delivering the programme to a corresponding group of female students.

2. The course comprised of ten hours of instruction over two weeks. This is a relatively short programme. Delayed post-testing was not carried out and this means it is not possible to comment on the status or availability of proceduralized items over time to participants, whether in terms of frequency of use or manner of production. Given the restricted access learners of Irish have to an L2 speech community, classroom practice is central both in acquisition and consolidation of gains. Studies in the longitudinal acquisition of FSs have great relevance for pedagogical intervention.

3. A control group was not used in this study and this is a significant limitation. Establishing evidence for proceduralization is not a straightforward procedure. It requires a consideration of a number of measures, in this study measures already employed in similar research were adopted. Proceduralization is understood to be an effect of practice and repetition. Further weight, therefore, could be given to any claims for a proceduralization effect by the use of a control group.

4. The study is classroom based and some of the limitations of such research are detailed in Chapter 4, as is the value and justification for classroom research. The limitations, however, are acknowledged. For example, it was noted in Section 6.8 that some of the participants

themselves raised concerns about the negative impact of other participants seen not to be genuinely interested in developing their spoken competence. It was also noted that, even among this group of Higher Level Irish students, there was quite a disparity in proficiency levels from A2 to B2. This created challenges in material design and delivery of instructions, and at times may have impacted negatively on the quality of interaction between participants.

5. Participation in *Bladair* did not result in longer speech runs overall. *Bladair* gave a strong focus to acquisition and use of a targeted set of 33 NDs. Many of these NDs would not sound disfluent if articulated with a pause on either side, and counts presented in Section 6.3 show that in 50% of instances of use the speech run was comprised entirely of an ND. Also, many of the NDs targeted many would typically be used at discourse boundary junctures. Evidence from post-testing suggests that participants became adept at using NDs to fill pauses and at critical points in the course of their narratives but were not prompted sufficiently to use the NDs to extend speech runs. It is suggested in Section 6.3 that such a development might have required a longer course and a course incorporating a specific focus on this aspect. Some possible approaches are indicated in the discussion on recommendations, Section 7.6.

6. The non-use and underuse of targeted NDs was discussed in Section 7.4. The possibility of some NDs lacking saliency or of participants being unsure as to ND meaning or function was indicated. While testing procedures establish evidence for use of NDs before and after participation in *Bladair,* they do not give conclusive reasons for non-use and underuse of NDs. Receptive tests might be useful in supplying evidence for saliency and understanding of meaning and function. Apart from possible relevance in understanding the low use of some NDs, pretest and post-test comparison would assist in giving more specific insight into course effects.

7. Testing procedures were restricted. Monologic testing was employed in the study. This was of obvious benefit in yielding clean data that could readily be analysed using quantitative measure. The down-side to this testing is, of course, that a skill typically employed in a broad range of interactional contexts is being assessed in a more unusual domain. While post-testing and pretesting procedures were identical, it is possible that the nature of the testing created a cognitive pressure of a different order to that presented by interaction. We noted, for instance, that Course 2 participants used some NDs in a restricted, programmatic manner. In conversation speech is co-constructed, principles of co-operation underpin a process of accommodation and adjustment as speech emerges from interactional dynamics. McCarthy (2005:28) describes this process as one of 'interactive support…

helping one another to be fluent and creating a confluence in the conversation' and asserts that assessment based on monologic performance 'would seem to be missing a great deal of what fluency really is'. Indeed, where the research is interested in automaticity it can be argued that interactional testing is appropriate because:

> [T]he context of utterance affects the degree of automaticity that is required on any individual occasion with multi-party conversation placing the highest demands on automaticity because of the competition for turn-taking (McCarthy 2010:4).

8. Due to the absence of delayed post-testing, it is not possible to comment on retention issues.

9. It has already been noted that the study did not explore attitudinal and motivational factors. For a number of reasons, it would have been desirable to do so, and to have given more opportunities for students to share feedback on various aspects of the course. The programme focus, materials and activities would not have been familiar to most students. The strong feedback and divergent views expressed by Course 2 participants on shadowing, for instance, suggest that the individual experience of some activities might have an effect of learning outcomes.

In addition, the complex set of attitudes held by many toward the Irish language and the negative attitudes held by many students towards Irish, the school subject, is of importance and of interest to all with an involvement in Irish language education. There are a number of aspects of *Bladair* which might have an effect on attitudes held towards the subject and language: engaging closely with NS input, giving Irish recordings the kind of discourse analysis one might give to any other language. Particularly important, perhaps, is having ample opportunities for speaking activities. It is essential that the development of classroom approaches and materials is informed by the students' experience with the language and by its impact on them. This feedback is even more relevant when approaches and activities proposed are quite distinct from typical practice, and when the language in question is a minority language with students having limited or no access to L2 speech communities.

7.7 Recommendations for further research

Some of the recommendations presented here address certain limitations just noted in the present study, some involve making adaptations to the fluency programme, while others derive from findings or lines of interest that emerged over the course of the study. An overall focus on pedagogy and formulaic language use is maintained in the various recommendations.

1. Language focus

Bladair incorporated a focus on some 30 NDs. Some of these NDs were equivalent in meaning or had close equivalence and it was suggested in Section 7.4.2 that this might have been a factor for low usage in some cases. Further study could investigate the effect of working with a more restricted set of NDs and careful screening for equivalent items. Perhaps a more interesting line of research would be to focus exclusively on particular types of NDs, such as fillers or vagueness items which accounted for just 18% of targeted ND use post-test. In the discussion of low counts it was proposed that some items might have lacked saliency for students, in other cases semantic subtleties or the range of discourse functions an ND might accommodate could present challenges for students and an uncertainty about apt use of the ND. Instruction in the use of a restricted set of such NDs could employ a range of activities working with appropriate input, exploring various dimensions of use. The design of production activities could help to consolidate form-meaning-function mappings for students. Close textual analysis of tests could give insights into the effectiveness of instruction in facilitating acquisition of NDs with low saliency or where discourse function is less transparent for learners.

The treatment given to SBs in Course 1 was clearly too brief to be effective. Given the potential benefit to learners of competence in SBs, a study might usefully focus solely on a small set of SBs. SBs provide frames for utterances, and developing competence in the use of SBs may require a considerable amount of practice in varied discourse tasks, with tasks progressively scaffolding acquisition.

Apart from NDs and SBs, there are many other lexical units that could usefully be investigated such as verb-noun collocations, adjective-noun collocations, phrasal verbs and prepositional verbs. Alternatively, studies could focus on learners' competence in the apt use of targeted items.

Finally, instead of presenting discrete items for instruction, research might focus on the effect of instruction more generally for chunking. Participants on such a course would be assisted in developing awareness of chunking as a basic feature of spoken language and of language production, and engage in production work demanding chunk output. A course comprised of activities such as dictogloss, mingle jigsaw, narrative reconstructions and work with pause boundaries might be appropriate. Raupach proposes,

> the characteristics of different forms of language productions – and therefore of different forms of underlying planning behaviour… can be discussed more fruitfully within such a broad framework (a broad and unspecific notion of formula) than on the basis of a pre-established notion of formulaic expressions defined linguistic or

pragmalinguistic terms only (1984:135).

Analysis of participants' recordings, pretest and post-test might thus contribute to revisions of existing criteria used to establish classifications of formulaic sequences.

2. Complexity-accuracy-fluency complex

The growing interest in CAF studies was noted in Chapter 2. Two issues of interest for further research arise. Firstly, it is claimed by Housen and Kuiken (2009) that the dimensions of complexity, accuracy and fluency are independent variables, and that complexity and accuracy relate to linguistic representation while fluency relates to control. While certainly challenging in terms of research design, it would be interesting to operationalise these variables within a fluency programme. Secondly, Skehan postulates a 'Trade-off Hypothesis', discussed in Section 2.2, and claims that 'fluency can be accompanied by either accuracy or complexity but not both' (2009:512). Findings from *Bladair,* do not support this hypothesis, with no significant increase in errors found and with evidence from more proficient students of NDs used in complex linguistic environments. These findings, however, are from a small sample size and it may not be appropriate to generalise from them. Research focusing on the CAF complex would require a larger sample size and clearly defined measures for each aspect.

With regard to programme development, findings from *Bladair* indicate reporting phrases might be usefully focused on. Difficulties with accurate use by participants of reporting phrases have been commented on at various stages. Stengers et al. (2011) also reported inflectional errors in formulaic sequence use by advanced students of Spanish. Furthermore, such errors impacted negatively on the proficiency ratings made of these students. In Section 7.5.2 we noted the suggestion by Boers and Lindstromberg (2012) that focus on form might be appropriate for FSs entailing syntactic inflection. Another possible route is suggested where repetition practice is shown over time to extend to syntactic environments. In Section 2.3.3 it was noted that de Jong and Perfetti's (2011) found evidence in delayed post-test of participants not just repeating discrete lexical items but also making repeated use of sentence structures with these items, 'thus leading to proceduralization of phrase building' (2011:560). On grounds of frequency of use, discourse value and syntactic challenge, the relative effectiveness of instruction targeting reporting phrases might be of interest in CAF research.

3. Instruction/Techniques

An area of enquiry that appears to be under-researched is that of instruction effects. De Jong notes 'few studies have investigated how instructional techniques affect the mechanisms

underlying the longer term development of fluency' (2011:535). Meunier reports a 'paucity of solid empirical studies reporting on formulaic-enhanced teaching practices' (2012:123). Boers and Lindstromberg review recent experimental and intervention research on FSs note the limited number of relevant studies and conclude, '[I]ntervention studies of ways of fostering…depth of knowledge of formulaic sequences, namely, proceduralization (for the sake of fluency), are rare as well (2012:98). More generally, Bygate asserts 'to date the impact and operation of alternative approaches [to fluency] have not been researched at syllabus or curriculum level' (2009:428). Operationalising instructional techniques is of obvious pedagogical interest. In the present study a general fluency programme and an intensive fluency programme were contrasted. Fluency findings were stronger for the intensive programme but the short nature of both programmes perhaps advantaged this course. Both courses employ recognised fluency techniques, 4/3/2 and shadowing, and feedback indicates some students did not enjoy intensive shadowing work. De Jong (2012) is currently researching the effect of shadowing on FS production and of 4/3/2 more generally, this research is carried out within a laboratory setting. There is also a need for classroom-based empirical studies investigating specific techniques from fluency and motivational perspectives, for example contrasting a control group with a group engaged in shadowing only and a group engaged in shadowing and 4/3/2.

A similar methodology could also be employed to investigation the effect of instruction on competence in specific aspects of FS use such as recognition, discourse management, phonological coherence, and automaticity of retrieval. An important caveat must be registered with regard to automatization activities in the context of communicative fluency. According to DeKeyser (2001), it is a fact 'that has been demonstrated repeatedly… automatized behaviour that results from consistent practice is highly specific… [thus] understanding sentences in a language quickly does not mean one can produce them fast' (2001:131). It would be of interest to test the degree to which automatized behaviour is skill-specific by taking learners who had received intensive speaking practice with FSs, using shadowing for instance, and testing their listening fluency on texts with these FSs. Further studies could investigate a 'domain-of-use' effect by contrasting a control group with two groups, a group engaged in restricted practice work (such as shadowing) and a group engaged in shadowing complemented with interactional activities demanding communicative production.

4. Testing

Testing procedures in the present study were limited. There was no delayed post-testing, thus it is not possible to comment on retention effects. Schmitt and Carter (2004) suggest studies

might usefully investigate the nature of attrition of FSs, 'are some elements retained better than others, or is the whole chunk either retained or forgotten (2004:19). Such research would contribute to an understanding of FS storage routes and patterns.

The importance of investigating attitude and motivation effects has already been emphasised in Section 6.8, because of the use of innovative treatments, because of the complex of attitudes held by many toward the Irish language, and because of the restricted engagement students typically have with the language.

The limitations of monologic testing were acknowledged in Section 7.6. Notwithstanding the practical considerations which lead to the use of monologic testing, these limitations merit attention because the language skill being assessed, speaking, is more typically used in interaction. Furthermore, we have seen in Chapter 3 that formulaic language is of particular benefit in meeting the discourse and interactional demands presented by real-time interaction. Testing that does not incorporate real-time interaction may even have an inhibitory effect on formulaic language production, as has already been suggested with regard to the low use of listener-directed NDs by participants of the present study. If instruction is on a restricted set of FSs testing should at least provide appropriate communicative contexts for the production of these FSs.

The lack of research on intervention and instruction has just been remarked on. More generally, Millar (2011:142) states 'there has been little empirical evidence to show that formulaicity of learner language directly contributes to communicative competence'. Boers et al. (2006) employed a total of four judges, two who independently rated proficiency levels and two who independently inspected FS use. Exploring the effect of formulaic language use on overall communicative competence may well require similar procedures.

Finally, it was noted in Section 2.2.2 that testing might usefully involve testing of L1 production. Apart from possibly assisting researchers in understanding more unusual hesitation patterns or speech rate in L2 tests, it might also be of interest in comparing patterns of formulaic language use, for example the use of vagueness terms.

5. Longitudinal case studies

The case-study analysis employed in addressing RQ4 was quite suggestive with regard to NDs by a low-proficiency student. Longitudinal case studies, yielding a corpus of individual speakers over time, could be of immense value in learning about the development of formulaicity and about the relationship between general proficiency development and FL

use. It appears such research is needed, Skehan (2009:529) asserts there is a 'dearth of research examining what happens as proficiency grows in relation to the performance areas of complexity, accuracy, lexis, and fluency'. Skehan makes interesting suggestions about how the Levelt model might be employed in this context, noting that the model describes a modular, parallel processing whereas learners under pressure may fall back on more serial processes. Martin and Ellis (2012) indicate a specific direction for longitudinal research. They investigated the role of PSTM and WM in learning an artificial language and suggest 'the value of constructionist accounts of the codevelopment of grammar and lexis would also be informed by assessing phraseological and formulaic knowledge in development, and the degree to which these relied on PSTM and WM' (2012:405). Conducting longitudinal studies brings the classroom into the picture. DeKeyser notes the classroom is 'the only practical way of assuring longitudinal research on instructed language learning' (2010:162). Timmins is a strong advocate of classroom research and contends, for example, that 'pedagogically oriented corpus research might move us closer to the elusive goal of a core spoken grammar of interaction' (Timmins 2012:519).

7.8 Summary and final conclusions

Formulaicity and automaticity provided a lexical and cognitive basis for this research, an appreciation of the potential importance of formulaicity for the language learner prompted the design of instructional intervention. Results for this small-scale study are, broadly speaking, supportive of the approach and of benefits for learners. As is clear from the discussion on limitations and further research, the study has also helped to clarify, for the researcher at least, many issues that could fruitfully be addressed by further research.

DeKeyser asserts both the legitimacy of, and need for, classroom research, and adds, '[T]his will require, however, that classroom researchers make an effort to design and carry out controlled experimental studies instead of merely descriptive and correlational ones' (DeKeyser 2010:162). When the researcher is also a classroom teacher, the endeavour can enrich both research and teaching practice.

This study commenced with reference to a 'personal story', it is pleasing to bookend in similar fashion. Undertaking this study has brought the researcher, an experienced teacher of Irish, to meet and work with the language in unexpected ways. Developing an understanding of the significance of features in the language frequently overlooked or ignored was challenging for a teacher for too long accustomed to querying inflectional changes in written

text with students[43]. For many students of Irish, the language is experienced as remote, different. Designing and working with some of the activities gave the researcher herself a sense of immediacy and closeness to the language; it is hoped the participants of *Bladair* may have shared in that connection.

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[43] A practice that had to be modified when a mock-strategic practice of responding at all times with 'An Tuiseal Ginideach?' eventually registered.

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Appendices

Appendix 1: Microskills in oral communication

1. Produce chunks of language of different lengths.
2. Orally produce differences among the English phonemes and allophonic variants.
3. Produce English stress patterns, words in stressed and unstressed positions, rhythmic structure, and intonational contours.
4. Produce reduced forms of words and phrases.
5. Use an adequate number of lexical units (words) in order to accomplish pragmatic purposes.
6. Produce fluent speech at different rates of delivery.
7. Monitor your own oral production and use various strategic devices—pauses, fillers, self-corrections, backtracking—to enhance the clarity of the message.
8. Use grammatical word classes (nouns, verbs, etc.), systems (e.g., tense, agreement, pluralization), word order, patterns, rules, and elliptical forms.
9. Produce speech in natural constituents—in appropriate phrases, pause groups, breath groups, and sentences
10. Express a particular meaning in different grammatical forms.
11. Use cohesive devices in spoken discourse.
12. Accomplish appropriately communicative functions according to situations, participants, and goals.
13. Use appropriate registers, implicature, pragmatic conventions, and other sociolinguistic features in face-to-face conversations.
14. Convey links and connections between events and communicate such relations as main idea, supporting idea, new information, given information, generalization, and exemplification.
15. Use facial features, kinesics, body language, and other nonverbal cues along with verbal language to convey meanings.
16. Develop and use a battery of speaking strategies, such as emphasizing key words, rephrasing, providing a context for interpreting the meaning of words, appealing for help, and accurately assessing how well your interlocutor is understanding you.

Source: Brown, 2000

Appendix 2: The formulaic and the creative

> 'I have **quite** often thought, **you know**, wake up **at three o'clock in the morning** and think, "**Oh God**, I **really was** a bit rough on, **I don't know**, Charles Kennedy **or whoever**. Uh and it troubles me because **in the end** they have legitimacy and I don't. They're elected and I'm not. I'm **just there** because **I happen to be** a journalist **who's ended up doing** what he does now…'

Source of transcript:OCR (2010)

Interviewed on a TV show, Jeremy Paxman expresses unease at his own questioning of politicians. He describes this unease succinctly and skilfully, using personal anecdote, argument and self-effacement. Formulaic expressions (a selected is glossed below) assist in the smooth, natural delivery of an engaging confession. The argument is made clear, the distinctive individual voice is still heard.

quite = emphasis

you know = filler, listener understanding

three o'clock in the morning = idiom, confessional moment

oh God = intensifying, prefacing comment

really was = emphasis

I don't know = vagueness, making general observation

or whoever = vagueness, concluding reference and moving to more general comment

in the end = discourse marker, 'the reality is'

just there, happen to be, who's ended up doing = self-effacement

Cairde	Spórt
Cad é an tábhacht a bhaineann le cairde? Is féidir bheith ag caint freisin faoi roinnt cairde agat féin, agus na rudaí a thaitníonn leat fúthu.	Cad é an spórt is fearr leat? An fearr leat bheith ag féachaint ar spórt nó ag imirt spórt? Cad iad na rudaí a thaitníonn leat faoi spórt?
Ábhair Scoile	**Laethanta Saoire**
Cad iad na hábhair scoile a thaitníonn leat? Cén fáth gur maith leat iad? An gceapann tú gur ábhair iad atá tábhachtach?	Inis dom faoi laethanta saoire a bhain tú taitneamh as. Cad iad na rudaí is mó a thaitin leat faoin saoire sin? Ar mhaith leat dul ar saoire arís go dtí an áit chéanna, nó leis na daoine céanna?
Duine atá tábhachtach i do shaol	**Éire**
Inis dom faoi dhuine a bhfuil meas agam air nó uirthi. D'fhéadfadh duine cáiliúil a bheith agat, nó duine i do shaol pearsanta féin. Cad iad na tréithe is maith leat sa duine sin?	An maith leat a bheith i do chónaí in Éirinn? Conas sin? Ar mhaith leat bheith i do chónaí anseo sa todhchaí?

Friends	Sport
What is the importance of friends? You can talk also about some of your friends and the things you like about them.	What is your favourite sport? Do you prefer to look at or to play sport? What are the things you enjoy about sport?
School Subjects	**Holidays**
What are the school subjects you like? Why do you like them? Do you think that are important subjects?	Tell me about a holiday you enjoyed. What are the things you enjoyed most about that holiday? Would you like to go on holidays in the same place or with the same people?
An important person in your life	**Ireland**
Tell me about a person you respect. It could be a famous person or a person in your own personal life. What are the traits you like in that person?	Do you like living in Ireland. How is that? Would you like live here in the future?

Appendix 4 Letters to parents and students

The effect on instruction in formulaic sequences on spoken fluency in a second language

Researcher: Geraldine Dillon B.A., M. Phil in Applied Linguistics
Supervisor:
School of Linguistic Speech and Communication Sciences, Trinity College Dublin

<date>

Dear Parent,
I am a teacher of Irish and am presently engaged in PhD research in Trinity College, Dublin. This research concerns new methods and materials designed to improve ability in spoken Irish in the classroom. <name of school> have kindly agreed to facilitate me in teaching a course to a class as part of this research. With the full permission and agreement of the regular Irish teacher, <name of teacher>, I will be taking a Fifth Year Higher Level class for one class a week, possibly two, between January and April. The research will involve not extra time on behalf of students and the Teaching Unit deals with material that is part of the Leaving Certificate syllabus. <name of teacher> will be kept fully informed of the material and approaches I will be using as the term proceeds.

As part of this study I will need to carry out a short test of the students' spoken ability before and after teaching the unit. This test will involve audio recording the students in a brief interview modelled on the Leaving Certificate oral. There may be some testing carried out from time to time as the course proceeds to check how well the approach and materials are working. In any reports on the project, neither individual student's names nor the school name will be used in order to maintain confidentiality and a coding procedure will be employed. All test records and audio recordings will be kept in a secure location by the researcher. You are welcome to feedback on the study on its completion. I hope this approach will benefit the students' confidence and enjoyment in speaking Irish.

I would be most grateful if you would give consent for your child to participate in this study by completing the form below and returning it to the school by <date>. Your child has also received an Information Leaflet on the research and a letter requesting his/her assent to participate.

Yours sincerely,

Geraldine Dillon

<contact details>

I give permission for --- (child's name) to take part in the research study being undertaken by Geraldine Dillon in _____ (name of school) on the promotion of oral fluency in Irish.

--   ----------------------------
Signature of parent   *Date*

INFORMATION LEAFLET FOR PARENTS
The effect on instruction in formulaic sequences
on spoken fluency in a second language

Researcher: Geraldine Dillon B.A., M. Phil in Applied Linguistics
Supervisor:
School of Linguistic Speech and Communication Sciences, Trinity College Dublin

Fifth Year students taking Irish, taught by <teacher's name> have been invited to take part in this research project which is being carried out by Geraldine Dillon, an experienced teacher of Irish. Students' participation is voluntary. The study is designed to investigate the effect of a particular teaching approach on ability in spoken Irish. <Teacher's name> has kindly agreed to allow me teach a special course to this Irish class one day per week for a ten week period, using this new approach. <teacher's name> will be kept informed on all activities used.

If you agree to the participation of your child in this project, this means that one Irish class your child attends each week will be focused on spoken Irish. Participation will not involve any additional work from students.

If you agree to the participation of your child, a brief interview will be carried out with him/her before and after the course. These interviews are modelled on the Leaving Certificate Oral but will last just four to five minutes. The interviews will be audio recorded. There may also be some brief testing carried out during the project. There will be opportunities for students to give feedback on their own experience of this approach and their views on Irish.

If you do not wish your child to participate in this project, he/she will still be required to attend the class delivered by the researcher but will not be required to participate in any of the testing described above.

Students' involvement in this project is on a confidential basis. In any reports on the project, students' names will not be used to safeguard confidentiality. This will be done be using a simple coding procedure. Names will be substituted for codes, and only the researcher and her supervisor will have access to the key matching name with code. All recordings and data will be kept in a secure location.

If interested in participating in the research, I would be most grateful if you would sign the form below and return in to <name of teacher> by <date>. If you have any questions about this research, please feel free to contact me.

Geraldine Dillon
<contact details>

PARTICIPANT   INFORMATION   LEAFLET
The effect on instruction in formulaic sequences
on spoken fluency in a second language

Researcher: Geraldine Dillon B.A., M. Phil in Applied Linguistics
Supervisor:
School of Linguistic Speech and Communication Sciences, Trinity College Dublin

You are invited to participate in this research project which is being carried out by Geraldine Dillon, an experienced teacher of Irish. Your participation is voluntary. The study is designed to investigate the effect of a particular teaching approach on ability in spoken Irish. Your Irish teacher, <name of teacher>, has kindly agreed to allow me teach a special course to your Irish class one day per week for a ten week period, using this new approach. Your teacher will be kept informed on all activities used.

If you agree to participate in this project, this means that one Irish class you attend each week will be focused on spoken Irish and will involve activities which may be new to you. It is hoped they will be of benefit to you. The activities should not cause students any anxiety or discomfort, indeed it is hoped that students will find them interesting and enjoyable. Participation will not involve any additional work from students.

If you agree to participate, a brief interview will be carried out with you before and after the Teaching Unit. These interviews are modelled on the Leaving Certificate Oral but will last just four to five minutes. The interviews will be audio recorded. There will also be a very brief written test before and after the Teaching Unit, a one-page 'fill the gap' exercise. There may also be some brief testing carried out during the project. There will be opportunities for students to give feedback on their own experience of this approach and their views on Irish.

If you do not wish to participate in this project, you will still be required to attend the class delivered by the researcher but you will not be required in the interviews described above.

Students' involvement in this project is on a confidential basis. In any reports on the project, students' names will not be used to safeguard confidentiality. This will be done be using a simple coding procedure. Names will be substituted for codes, and only the researcher and her supervisor will have access to the key matching name with code. All recordings and data will be kept in a secure location.

If you have any questions about this research, please feel free to contact me.

Geraldine Dillon

ASSENT FORM

The effect on instruction in formulaic sequences
on spoken fluency in a second language

Researcher: Geraldine Dillon. B.A., M. Phil in Applied Linguistics
Supervisor:
School of Linguistic Speech and Communication Sciences, Trinity College Dublin

I am invited to participate in this research project which is being carried out by Geraldine Dillon. My participation is voluntary.

The study is designed to investigate the effect of a particular teaching approach on ability in spoken Irish. If I agree to participate, this will involve my participation in class for the duration of the project. It will also involve my participation in testing to be carried out mainly before and after the course.

It is hoped this research will benefit me in my own ability to speak Irish. I understand there is little risk of my participation involving any risk or discomfort to me. I also understand any information obtained during this research which can be identified with students will be treated confidentially by using a simple coding procedure which replaces names with a special code.

I understand that the project involves audio-recording students and that portions of these recordings, or written transcripts of them, may be used for teaching or other research purposes. Confidentiality in all cases will be safeguarded through use of the coding procedure. All data will be kept in a secure location by the researcher.

If I have any questions about this research I can ask Geraldine Dillon at <contact details>. I may also contact <supervisor details>.

_____

I understand what is involved in this research and I agree to participate in the study. I have been given a copy of the Participation Information Leaflet and a copy of this assent form to keep.

--   ------------
Signature of participant   *Date*

I believe the participant is giving informed consent to participate in this study.

--   ------------
Signature of researcher   *Date*

Appendix 5 Attendance figures

Course 1	
Student	**Total**
Gavin	8
Conor	9
Cormac	10
Jack	9
David	10
Dan	9
Cillian	9
Rory	9
Seán	8
Michael	10
Tadhg	9
John	9
Liam	8
Rian	7
Eamon	10

Course 2	
Student	**Total**
Eoin	9
PJ	9
Matt	9
Andy	7
Niall	9
Sam	7
Cal	10
Colm	9
Garreth	9.5
Fionn	7
Ciarán	9
Ross	9.5
Richard	8

Appendix 6 Shadowed reading

/ indicates natural phrase break (not indicated on text given to participants)

Gan aon amhras/ is rud maith é/ post páirtaimseartha a bheith agat/. Is traenáil iontach é/ mar caithfidh tú a bheith/ ag do phost in am/ agus é a dhéanamh i gceart/. Bíonn tú neamhspleách/ nuair a bhíonn post agat/ mar go mbíonn do chuid airgid féin agat/ agus ní bhíonn tú ag brath ar do thuismitheoirí/. Ceapaim go mbíonn níos mó measa agat/ ar airgead freisin/ mar tuigeann tú/ go gcaithfidh tú oibriú/ chun é a fháil.

Source: Ó Ruairc et al. (2010)

Appendix 7 Errors in oral reading

Post-test shaded	Pronunciation	False Start	Word omission /substitution	Inflection	Repetition	Tot
Andy	Neamhspleách		mar bíonn			2
Andy		do ph_				1
Cal	e, post x 4 bíonn	agat x 2	do, é , é a/ag, go/do, a/ar			14
Cal	post postaimseartha oibriú		é go/a é	do post a déanamh a bhíonn		9
Ciarán	póst x 3 tugann	pair_		do póst go bhíonn		7
Ciarán	póst x 1			do post go chaithfidh		3
Colm	póst x 3 néamhspleách dú oibre, oíbre	u-	do/tú	do póst a déanamh go bhíonn go caithfidh a fail		14
Colm	néamhspleach dú oibre	a- agu- a fa_	an	do post a déanamh a fáil	chun é a fháil	11
Eoin		do po-				1
Eoin						0
Fionn	post pairrt- (slow) aimseartha obair obrí	n- aga- t-		do tuismitheoirí		8
Fionn		parts- t-		do tuismitheorí go caithfidh		4
Matt	tugann caithfid	o_	e go/a	do post a bhíonn do tuismitheoirí		8
Matt	Thugann		e go	bhíonn thugann go caithfidh		6
Niall	anras póst x 2			do post go bíonn do tuismitheoirí go caithfidh	Ní	8
Niall	póst x 2	an-, anra-		do póst do tuismitheoirí go caithfidh	Ní	8
PJ	post x 3	p-		do post go caithfidh	post bíonn tú neamhspleách	8
PJ		pós				1
Richard	Néamhspleach	postaim- neamhsplea- aig-	postaimseartha			5
Richard		ina- oi_	agus		in am, i	4

Appendix 8 Feedback form

Bladair: **Ag Caint as Gaeilge**

Thank you for your participation in this programme.
Your feedback on the programme is important and greatly appreciated.

This course focused on three techniques. Please indicate how useful you found each activity in developing *your* fluency in spoken Irish. Tick one box on each line as appropriate.

	Not very useful	No noticeable effect	Useful	Very useful
Shadowing Close repetition of speakers				
3 step narration Repeated narration: recording and delivering to listeners				
Frásaí Cairdiúla Prompts to use these phrases. Various activities employing phrases: insertion into texts, quizzes, conversation circle.				

On this course several times you were involved in activities based on listening to Irish speakers. Tick one box on each line as appropriate.

Has this experience…	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
Helped you feel more comfortable in listening to spoken Irish?				
Given you insight into some characteristics of fluent speech?				

On this course several times you were involved in activities asking you to answer questions and to narrate stories, with a focus on using particular phrases. Tick one box on each line as appropriate.

Has this experience…	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
Helped you to enjoy speaking Irish in any way				
Not helped your confidence in speaking Irish				
Given you a sense of sounding more natural in the way you speak Irish				

This course was centred on spoken language. It incorporated listening to fluent speakers and activities prompting spoken language. Tick one box on each line as appropriate.

Do you think such an approach	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
Can help students in their development of spoken Irish in the second-level classroom?				
Might not be relevant to students' preparation for the Leaving Certificate exam?				

What are the main insights, if any, you have gained into the nature of fluent speech?

_____

_____

_____

Have your views on what might be helpful for a learner to develop oral fluency in another language changed in any way? If so, please indicate how.

_____

_____

Based on your own personal experience, do you have any other comments you would like to make on the course, *Bladair?* Your comments may be on the course in general or on a particular aspect of the course.

_____

_____

_____

Go raibh maith agat

Appendix 9 CEFR Qualitative aspects of spoken language use

	RANGE	ACCURACY	FLUENCY	INTERACTION	COHERENCE
C2	Shows great flexibility reformulating ideas in differing linguistic forms to convey finer shades of meaning precisely, to give emphasis, to differentiate and to eliminate ambiguity. Also has a good command of idiomatic expressions and colloquialisms.	Maintains consistent grammatical control of complex language, even while attention is otherwise engaged (e.g. in forward planning, in monitoring others' reactions).	Can express him/herself spontaneously at length with a natural colloquial flow, avoiding or backtracking around any difficulty so smoothly that the interlocutor is hardly aware of it.	Can interact with ease and skill, picking up and using non-verbal and intonational cues apparently effortlessly. Can interweave his/her contribution into the joint discourse with fully natural turntaking, referencing, allusion making, etc.	Can create coherent and cohesive discourse making full and appropriate use of a variety of organisational patterns and a wide range of connectors and other cohesive devices.
C1	Has a good command of a broad range of language allowing him/her to select a formulation to express him/herself clearly in an appropriate style on a wide range of general, academic, professional or leisure topics without having to restrict what he/she wants to say.	Consistently maintains a high degree of grammatical accuracy; errors are rare, difficult to spot and generally corrected when they do occur.	Can express him/herself fluently and spontaneously, almost effortlessly. Only a conceptually difficult subject can hinder a natural, smooth flow of language.	Can select a suitable phrase from a readily available range of discourse functions to preface his remarks in order to get or to keep the floor and to relate his/her own contributions skilfully to those of other speakers.	Can produce clear, smoothly flowing, well-structured speech, showing controlled use of organisational patterns, connectors and cohesive devices.
B2+					
B2	Has a sufficient range of language to be able to give clear descriptions, express viewpoints on most general topics, without much conspicuous searching for words, using some complex sentence forms to do so.	Shows a relatively high degree of grammatical control. Does not make errors which cause misunderstanding, and can correct most of his/her mistakes.	Can produce stretches of language with a fairly even tempo; although he/she can be hesitant as he/she searches for patterns and expressions. There are few noticeably long pauses.	Can initiate discourse, take his/her turn when appropriate and end conversation when he/she needs to, though he/she may not always do this elegantly. Can help the discussion along on familiar ground confirming comprehension, inviting others in, etc.	Can use a limited number of cohesive devices to link his/her utterances into clear, coherent discourse, though there may be some 'jumpiness' in a long contribution.

B1+					
B1	Has enough language to get by, with sufficient vocabulary to express him/herself with some hesitation and circumlocutions on topics such as family, hobbies and interests, work, travel, and current events.	Uses reasonably accurately a repertoire of frequently used 'routines' and patterns associated with more predictable situations.	Can keep going comprehensibly, even though pausing for grammatical and lexical planning and repair is very evident, especially in longer stretches of free production.	Can initiate, maintain and close simple face-to-face conversation on topics that are familiar or of personal interest. Can repeat back part of what someone has said to confirm mutual understanding.	Can link a series of shorter, discrete simple elements into a connected, linear sequence of points.
A2+					
A2	Uses basic sentence patterns with memorised phrases, groups of a few words and formulae in order to communicate limited information in simple everyday situations.	Uses some simple structures correctly, but still systematically makes basic mistakes.	Can make him/herself understood in very short utterances, even though pauses, false starts and reformulation are very evident.	Can answer questions and respond to simple statements. Can indicate when he/she is following but is rarely able to understand enough to keep conversation going of his/her own accord.	Can link groups of words with simple connectors like 'and', 'but' and 'because'.
A1	Has a very basic repertoire of words and simple phrases related to personal details and particular concrete situations.	Shows only limited control of a few simple grammatical structures and sentence patterns in a memorised repertoire.	Can manage very short, isolated, mainly pre-packaged utterances, with much pausing to search for expressions, to articulate less familiar words, and to repair communication.	Can ask and answer questions about personal details. Can interact in a simple way but communication is totally dependent on repetition, rephrasing and repair.	Can link words or groups of words with very basic linear connectors like 'and' or 'then'.