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Teaching subjects as languages: academic English development in the multilingual post-primary classroom

Mandy Jane Collins

PhD thesis in Applied Linguistics

National University of Ireland, Cork

College of Arts, Celtic Studies and Social Sciences
German Department

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Head of German Department: Dr. Gert Hofmann

Supervisor: Prof. Manfred Schewe

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I declare that this thesis is my own work and has not been submitted for another degree either at University College Cork or elsewhere.

. . . . Mandy Jane Collins . . . .

Dedicated to

Janie Haynes-Ager

and

Ella Karina Collins

Acknowledgements

Boundless thanks to Prof. Manfred Schewe for his wisdom, patience and generous encouragement as supervisor.

Sincere gratititude to the participant teachers and pupils who welcomed me into their school and classrooms and contributed their valuable perspectives to this research.

Abstract

This action research study explores three classroom interventions in the context of Biology and Religion transition year classes (15 year old pupils) to answer these research questions:

1. How can academic language development be integrated into mainstream curriculum lessons to the benefit of all pupils in a multilingual post-primary context?

2. What are pupils' and teachers' attitudes towards classroom interventions designed to integrate academic language development into lessons?

The study includes a detailed description of the post-primary educational context of Ireland and discusses ethical issues pertaining to school-based research. It reviews the literature around academic English, particularly at post-primary level. By analysing public examination papers, classroom texts and classwork written by pupil participants, this study offers a description of post-primary academic English specific to this context in real terms. Systemic functional linguistics, particularly genre theory, provides the linguistic theoretical framework, with sociocultural perspectives based on the work of Vygotsky providing the theory of learning.

Language is integral to learning. As academic English development supports subject content learning, it should be a feature of all subject lessons, pre-planned and spontaneous. There is evidence of a lack of awareness of the importance of academic English development at all levels of the education system. Initial teacher education and continuing professional development for serving teachers is required to equip all teachers to integrate academic English development into their mainstream subject lessons. This will also address English as an additional language (EAL) and promote the ideal of plurilingualism. The study recommends raising linguistic awareness, in particular through teacher education, to the benefit of all post-primary pupils.

Glossary of terms

"Englishualism"

"Englishualism" refers to the general attitude underlying mainstream English medium post-primary education and educational policy in Ireland that the English language must be the language of instruction to the exclusion of other mother tongues spoken by pupils. Because of "Englishualism" all non-native English speakers must learn English, while also learning through English, whether they receive English language support or not. "Englishualism" contrasts with the Council of Europe ideal of plurilingualism and fosters a deficit view of pupils' bilingualism.

"Pluricontext"

"Pluricontext" is a term created to refer to the multi-faceted context of this study, which consists of different layers, perspectives, influences, stakeholders, principles, histories, institutions, individuals, groups, languages, ideals, views, needs, cultures and challenges.

Plurilingualism

The Council of Europe term "plurilingualism" conveys the ideal that citizens of Europe use two or more languages in addition to their mother tongue, with a range of interrelating and interacting proficiencies.

Research lesson

The term "research lesson" is used to refer to lessons during which the normal teacher implements an intervention as part of the research project, with the researcher present.

Chapter 1 - Introduction

At an Interdisciplinary Linguistics Conference (ILinC) I attended in Belfast in 2011, M. A. K. Halliday illustrated the interdisciplinary nature of Applied Linguistics by proposing that rather than every university having a Department of Applied Linguistics, there should be an applied linguist in every department. A major finding presented in this thesis is that there should be applied linguists at every level of the Irish education system, because the current system tends to ignore the language dimension of learning at every level. This project focuses on post-primary education. Applied linguists are needed in teacher education to equip teachers to develop their pupils' academic English to support subject learning. Applied linguists are needed at the State Examination Commission to make explicit the language knowledge being assessed in public examinations. Applied linguists are needed at the Department of Education and Skills, the Teaching Council, textbook publishers, teacher unions, subject teacher associations and school management to raise awareness of the importance of academic English development in every subject. This would facilitate considerable social transformation including the resolution of current educational inequities and the promotion of plurilingualism in Ireland.

This thesis and the research it presents are designed around the basic cycle of action research, which is intended to promote such social transformation:
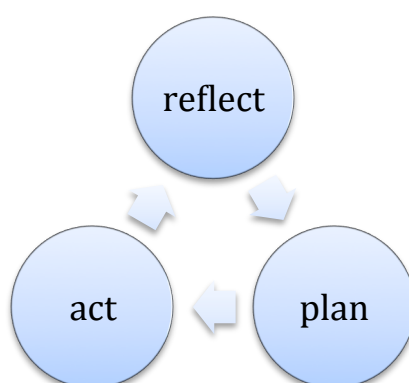
However, action research is not as tidy as this diagram may suggest and the cycle may sometimes flow the other way:
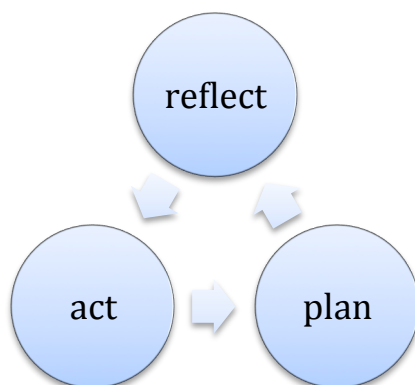
Or, more realistically, these research activities may co-occur, with planning being closely associated with reflection, while planning and reflection both inspire and are inspired by action.
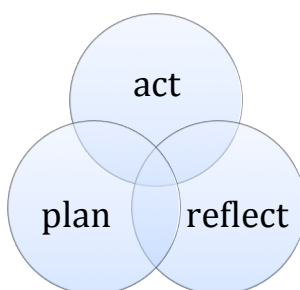
This thesis is linear and two-dimensional, however the chapter structure attempts to reflect the action research cycle, with the notion of co-occurrence implicit. Chapters 2 to 5 contain the results of extensive background research into the context of the study, the multilingual post-primary classroom, the literature of academic English, the theoretical frameworks of systemic functional linguistics and sociocultural theory underlying the research, and the ethical considerations pertinent to researching with children in this context. These four chapters represent reflection and planning in preparation for the main action of the project, presented in chapter 6 which explains

the research methodology and describes the methods of data collection and the three types of analysis used: linguistic, descriptive and thematic. Chapter 7 presents the results of these analyses with some reflection on their significance. Chapter 8 makes connections between these chapters, using the three classroom interventions of the research design explained in chapter 6 to reflect on the notion of linguistic awareness among the research participants. The reflections also connect the lack of linguistic awareness suggested in the literature discussed in chapter 3, with Irish government policy described in chapter 2 and public examinations, linguistically analysed at the beginning of chapter 7. The theme of learning, identified through thematic analysis, connects with the theoretical frameworks presented in chapter 4, which are also used to explain the classroom interventions.
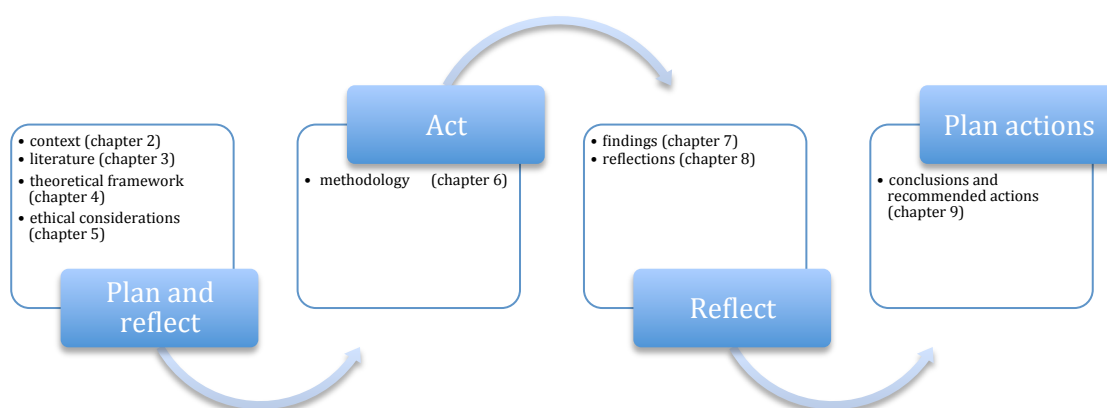
The overall conclusions arising from these reflections and connections are presented in chapter 9, with recommended actions. This project addresses two research questions, stated at the beginning of chapter 6. The secondary question concerns the research participants' attitudes to the classroom interventions of the project; this is answered by the thick description presented in the second section of chapter 7 (pp.168-196). The main research question is addressed by chapter 9, which draws on the whole thesis and the entire project.

Academic English at post-primary level resists precise definition, however this thesis offers descriptions from different perspectives. Chapter 3 reviews the literature, giving an overview of the diverse approaches to and attempted definitions of

academic language, acknowledging the origins of this theory in bilingual educational research and its importance in revealing linguistic social injustice. This appears to be highly relevant in the Irish context, given the growing multilingualism described in chapter 2 as well as the neglected European ideal of plurilingualism. From the perspective of the pupil and teacher participants of this project, academic English is context-specific, explained as the English of the classroom, of textbooks and other educational media, and the English of examinations. To describe academic English within the research context, chapter 7 presents analysis of a variety of written texts exemplifying this academic English: examination papers taken by the pupils, texts chosen by the teachers for use in the classroom and written work produced by the pupils during lessons. Although this analysis highlights some general challenges for non-native English speaking pupils, issues associated with multilingualism emerge as isolated from other issues found in the data containing participants' attitudes towards academic English. The conclusions and recommended actions of chapter 9 focus on the major finding of the need to raise linguistic awareness, to the benefit of all pupils. Thus, the thesis advances from the distinction between linguistically advantaged and disadvantaged pupils, to a focus on improving the learning of all pupils, as well as the potential for the development of plurilingualism at school.

This project explores academic English development in every subject, for each pupil in a class of approximately 30, where there may be a wide range of motivation and performance between pupils and between subjects for each pupil, and where there may be discipline issues, time pressures, limitations of classroom space and furniture and multiple other challenges facing pupils and their teachers. My background is in teaching English to speakers of other languages, mostly in private language school environments. Such classrooms present few of the common challenges of the mainstream post-primary classroom: there are fewer pupils/students in a class, who tend to all have a similar level of English and are generally highly motivated to improve. This is my area of expertise and my comfort zone. However, I particularly wanted to cross the boundary between my familiar, motivated, small classroom to explore the post-primary classroom, where I am an outsider. This is because, recognizing that school subject content learning relies on language learning for all pupils, whatever their mother tongue, opens up the possibility of exploring the use of teaching methods usually associated with (foreign/second) language teaching for

teaching all curricular subjects. I believe inequalities can be rebalanced and engagement promoted through introducing activities which focus on the language which pupils need in order to learn different subjects. This research interest sprang from my contact with Irish state qualified teachers attending courses on teaching English as a foreign language, which I was delivering at University College Cork Language Centre. Many of these teachers were looking for support to help the minority of pupils learning through English as an Additional Language (EAL) in their mainstream subject classes. As explained in chapter 2, there is minimal support for teachers in this area. This research is my response to this situation.

My approach to teaching English to speakers of other languages is learner centred, prioritizing the needs of the learners within their contexts and from their level of proficiency. My teaching approach exemplifies a "post-method pedagogy" (Thornbury 2006, p.131) of "principled eclecticism" (Scrivener 2005, p.40) combining elements drawn from Humanistic Language Teaching, Dogme, teaching through drama, the Silent Way, and other communicative language teaching approaches, chosen to suit the needs of the particular learners in a class. I aim to encourage language use during lessons, and for learners to develop an understanding of the meanings of linguistic patterns and structures and the ability to identify and discuss those patterns as they occur within their contexts, using linguistic meta-language and tools such as phonemic script. In these ways, I aim to empower learners to develop learner autonomy. My main English language teaching influences are Mario Rinvolucri, Michael Swan, Penny Ur, Scott Thornbury, Friederike Klippel and Adrian Underhill. The theoretical frameworks underlying my teaching approach as well as this research, are presented in chapter 4; systemic functional linguistics highlights the meaning of language within its social context, and sociocultural theory based on the work of Vygotsky provides a rationale for collaborative learning.

Post-primary teaching follows subject curricula and tends to focus on the development of subject knowledge, with little attention paid to how language is used to express that knowledge beyond the level of lexis. This project explores the transfer of language learning activities to post-primary subject classrooms. Principles underlying these activities include: maximizing learner language use (speaking, listening, reading and writing), providing opportunities for learners to negotiate

meanings with each other as well as the teacher, developing understanding of linguistic meanings by highlighting patterns and structures occurring in appropriate model texts, and empowering learners to talk about language through the use of linguistic meta-language. The classroom interventions of this study are intended to explore the use of the four language skills: reading, speaking, listening and writing by the pupils, the impact of mime and teacher silence, and the possibility of embracing the linguistic diversity represented by EAL pupils as a valuable resource. Such activities embody a shift towards collaborative relations of power between pupils and teachers (see pp.44-45) in the classroom and away from the teacher-centred, transmission of knowledge model of teaching.

My main research question includes the objective that academic language development should benefit all pupils, highlighting that this is not just for the EAL pupils and pupils at a linguistic disadvantage. I offer a personal anecdote to illustrate how the lack of awareness of the need for academic English development affected me as an undergraduate. Coming from a linguistically advantaged background and having achieved an A grade in English, in the state examination used for access to third level education, I wanted to choose the option of writing a dissertation instead of taking an examination in one of my university courses. I was told I could not take that option because my writing was not of a high enough standard. At the time, being in awe of my tutor, I accepted this judgement and probably believed that I would never be capable of writing a dissertation. Now I realise that if I had expected my teachers to support my language development as well as my subject content learning, I would have felt able to insist that I was attending university in order to learn and ask for the help I needed with my writing. Explicit academic English development at school produces this expectation as a logical consequence.

The language used to write a work of Applied Linguistics about academic English is, of course, highly self-conscious. In general, this thesis is written in the third person, but I use the first person for reflective sections, when it is appropriate and the most natural form of expression for its purpose. I use the term "pupil" to refer to post-primary school children. Many of the writers, particularly in North America, use the term "student" for the same purpose. Where pupils' written contributions are quoted, spelling and other errors have been retained.

Chapter 2 – "Pluricontexts"

Introduction

There are many different stakeholders in post-primary education: pupils, teachers, parents, school management, religious institutions (notably the Roman Catholic Church), and government bodies, in particular the Department of Education and Skills, formerly the Department of Education and Science. Significant outside influences include the forces of migration, global economic expansion and recession, and various international organizations providing standards and commentaries, such as the Council of Europe and the Organization for Economic Co-operation and Development. There is a body of literature produced by researchers and scholars describing and investigating the Irish context, making connections between various stakeholders, influences and international educational research on multilingual and intercultural classrooms. All these perspectives together constitute the background context of this study. I suggest my own term "pluricontexts", to use as a title intended to highlight the complexity of the situation as well as to make reference to the term "plurilingualism".

Plurilingualism is a goal of Council of Europe language education policy, that each European citizen will develop plurilingual competence, that is, a fully developed mother tongue plus at least two foreign languages to some level of proficiency, within the context of lifelong learning. Plurilingualism implies an underlying capacity for language, expressed in a de-compartmentalised approach to the use of three or more languages. This contrasts with what was found in Ireland: "an unrelated set of fragmentary competences in particular languages" (Council of Europe and Department of Education and Science 2007, p.33). The Council of Europe sees plurilingualism as an essential component of democratic citizenship as well as a functional necessity for European unity.

This thesis is concerned with linguistic issues, particularly around academic English at the level of secondary schooling. The field of study of this research is the

multilingual post-primary classroom, set within and influenced by these background "pluricontexts". This chapter presents a picture of the developing Irish education system, tracing recent demographic changes, which have affected the linguistic profile of classrooms, how the government has responded with policy facilitating the teaching of English to immigrant pupils and how teachers and educational researchers have reacted to this policy. The chapter introduces my own term "Englishualism" reflecting on Irish government policy, (pp.33-34) to characterise the underlying attitude of educational policy makers. Describing the "pluricontexts" highlights the challenges and gaps in knowledge of this field of study, which this research project aims to address, with connections made in the reflection sections, following the action research methodology of reflection, planning and action.

Together with the review of Applied Linguistics literature presented in chapter 3, the theoretical frameworks underlying this study presented in chapter 4, and the ethical considerations pertinent to this project discussed in chapter 5, this contextual knowledge informs the design of the classroom interventions and research methodology choices, which are described in chapter 6; chapters 2, 3, 4 and 5 make up the initial reflection stage of this action research study. Literature referred to in chapters 2 and 5 generally comes from sources outside of the Applied Linguistics field, such as Educational Studies and Sociology. Research referred to in chapter 3 is also drawn from a wide range of areas, but all with a linguistic focus. Chapter 4 concerns linguistic and educational theory.

Post-primary schools in Ireland

This section explains the term "post-primary" and describes the types of second level schools in Ireland, outlines how children progress through the years of schooling, positioning the pupil participants of this study, and provides background information about the teaching and learning of languages. The last twenty years have seen some developments in post-primary education: diversity has emerged from the Roman Catholic roots of the school system, assessment is starting to become less orientated towards high-stakes examinations and a wider range of languages may be taught within the curriculum, while others are being acknowledged and formally assessed.

"Post-primary" schools

> To an outside observer, what strikes as unusual about the Irish education system is the level of Church involvement – the fact that we have a state funded 'aided' system where ownership and control rests predominantly with Trustees/Patrons, the latter almost exclusively defined in denominational terms. (Devine 2011, p.8)

The reason why this study refers to "post-primary" schools rather than "secondary" schools, is because the term "secondary" has a particular meaning, with a religious connotation, in the context of Ireland. There are three types of second level school in Ireland: secondary schools (51%), vocational schools (36%) and community and comprehensive schools (13%) (approximate percentages for 2014-2015, (Department of Education and Skills (DES) 2015)). The collective term "post-primary" is used to distinguish the whole secondary sector from the mainly Roman Catholic owned and run "secondary schools". Vocational schools also tend to be Roman Catholic influenced, with priests on the controlling bodies (Devine 2011, p.9); "historically the dominant faith in Irish school has been Roman Catholicism" (Parker-Jenkins and Masterson 2013, p.482). The most recently developed types of post-primary schools are community and comprehensive schools, which are controlled by Education and Training Boards. In this sector, Educate Together is a grassroots departure from the traditional style of formal education. Its stated mission is being "an agent for change in the Irish State Education System" (Richardson 2009, p.2), championing the core principles of being multi-denominational, co-educational, child-centred and democratically run. The first of their 68 government assisted primary schools opened in 1978. Three Educate Together post-primary schools opened in 2014, with five more planned for 2016. In total, there were 732 post-primary schools in 2015, with a population of 339,207 pupils (excluding those taking post-Leaving Certificate courses).

In May 2005 the Department of Education and Skills launched the Delivering Equality of Opportunity in Schools (DEIS) programme, to address the issue of educational disadvantage. Schools may be awarded DEIS status if they have a high concentration of pupils from disadvantaged backgrounds, which results in the school

being allocated additional funding. In the school year 2014/5 there were 192 post-primary DEIS schools, approximately one quarter of all post-primary schools (DES n.d.).

The five or six years of post-primary schooling

Junior Cycle	Transition Year	Senior Cycle
•Ages 12-15 •Three years •Junior Certificate (Junior Cycle Student Award)	•Ages 15-16 •One optional year •No examinations	•Ages 15 to 18 •Two years •Leaving Certificate/ Leaving Certificate Vocational Programme/ Leaving Certificate Applied
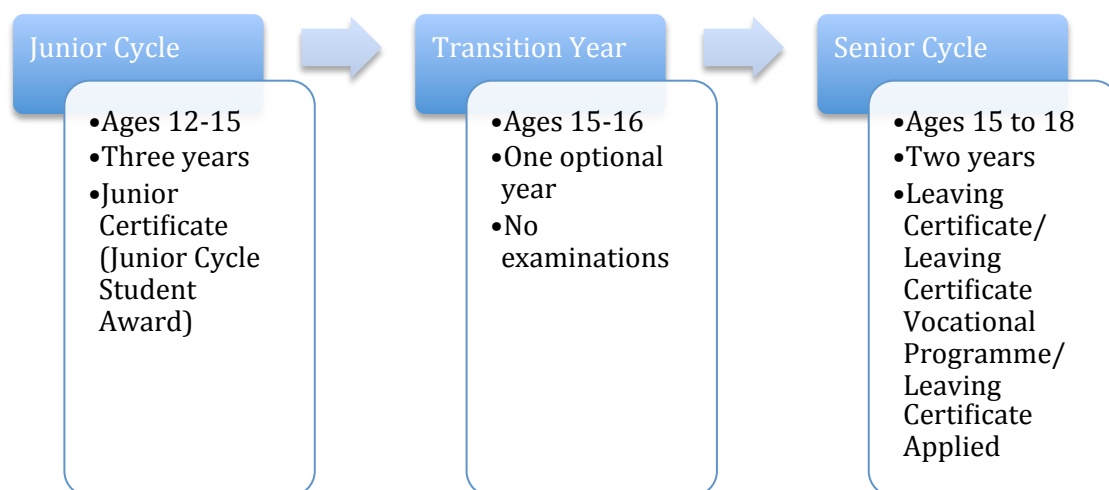
The pupils who participated in this project were from transition year, which is a (usually optional) year following the three years of junior cycle, and followed by the final two years of senior cycle. Transition year was launched as part of mainstream schooling in 1994, with aims of encouraging personal development and maturity through experience of adult life, and development of interdisciplinary skills in self-directed learning. Schools are directed to involve parents and the wider community as educational partners. There are no examinations during transition year. "The aims and philosophy of Transition Year should permeate the entire school" (DES 1994, p.3), however, the following two years of senior cycle are currently still dominated by the final school-leaving examinations. There are three discrete tracks within the senior cycle: the established academic Leaving Certificate (LCE), the Leaving Certificate Vocational Programme (LCVP) which concentrates on technical subjects and has a vocational focus, and the Leaving Certificate Applied (LCA) which does not give direct access to higher education. A new form of assessment for the junior cycle, the Junior Cycle Student Award, was proposed to commence in September 2014, but met with resistance from teaching unions who favour external assessment

over the proposed requirement for teachers to assess their own pupils for their final examination. At the time of writing this had not yet been resolved. Children begin post-primary schooling at 12 years old and may leave school at the age of 16; they are not obliged to attend the senior cycle.

Languages in schools

The language of instruction in government-assisted schools is either English or Irish, which are the two official national languages. 91% of post-primary schools are purely English medium. Of the remaining 9%, 45 schools teach all pupils all subjects through Irish, 11 schools teach some pupils all subjects through Irish and 9 schools teach some pupils some subjects through Irish (DES 2014). Modern languages, (predominantly French), are also offered as curricular subjects. The Post-Primary Languages Initiative was set up by the DES in September 2000 to promote curricular modern languages, as well as currently non-curricular languages, such as Irish Sign Language and Polish. According to the National Council for Curriculum and Assessment (NCCA 2014), Ancient Greek, English, French, Gaeilge, German, Italian, Latin and Spanish are on the junior cycle curriculum, with Arabic, Hebrew Studies, Japanese and Russian added as senior cycle curricular subjects. There are also non-curricular languages, which are examined, but not taught (see p.39). In 2015 Leaving Certificate examinations for non-curricular languages were offered in Latvian, Lithuanian, Romanian, Modern Greek, Finnish, Polish, Estonian, Slovakian, Swedish, Czech, Bulgarian, Hungarian, Portuguese, Danish, Dutch and Croatian (State Examination Commission, n.d.).

In 2004 the DES invited the Council of Europe Language Policy Division to assist in producing a Language Education Policy Profile for Ireland. This involved an international expert group from the Council of Europe visiting and discussing language education policy with key stakeholders in Ireland during 2005 and 2006. At the beginning of this process the DES highlighted priorities for analysis, including: the decreasing numbers of pupils taking foreign languages in the Leaving Certificate, the needs of pupils whose mother tongue is neither English nor Irish and the tendencies for languages: English, Irish, French, German and Spanish, to be taught in

isolation from one another, essentially as examination subjects. The Language Education Policy Profile identifies various sensitive issues, including: that the nine or more years of learning Irish at school often fail to develop a reasonable communicative ability in Irish; that learning a foreign language is not compulsory in school; that due to recent immigration many classrooms are currently multilingual; that Ireland has failed to follow the European lead concerning plurilingualism, and that Ireland lacks the framework of a national integrated language policy within which to plan language education (Council of Europe and Department of Education and Science 2007).

The Language Education Policy Profile characterizes the problems around Irish in schools as: inadequate levels of proficiency and low levels of motivation for learning and using Irish among many pupils; poor linguistic proficiency of some teachers, who receive insufficient professional development within a teacher education system which is not coordinated nationally; and a lack of access to appropriate teaching materials (Council of Europe and DES 2007, p16). Proficiency in Irish tends to be higher in Irish-medium schools and schools in the Gaeltacht (areas characterized by mother tongue Irish). Another area of concern is that all pupils follow the same curricula for English and Irish and take the same state examinations, irrespective of their mother tongue and language of instruction.

The suggestion that languages such as Irish and French are taught more like examination subjects than languages, focusing on reading and writing skills with very little development of oral skills, is supported by anecdotal rather than empirical evidence (Council of Europe and DES 2007, p.19). However the report expresses

> 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 and DES 2007, p.9)

In view of the lack of a national language policy, with the Official Languages Act of 2003 only concerned with the status of Irish, the central recommendation of the report is "to examine the feasibility of an integrated, coherent, language in education policy" (Council of Europe and DES 2007, p.34). Consultation with post-primary (and

above) stakeholders for a Foreign Languages in Education strategy for Ireland began in August 2014.

Immigration and multilingualism

This section describes how the linguistic profile of the Republic of Ireland has changed dramatically over the last 20 years and the impact this has had on the post-primary classroom.

The linguistic profile of Ireland

> The context for languages is unique, given the special role occupied by Irish as national language, linked to the fact that English as the other official language is increasingly the dominant language not only in Ireland but also throughout the world. (Council of Europe and DES 2007, p.13)

Historically, linguistic diversity on the island of Ireland has been associated with political manipulation and social tension, with English enforced and Irish repressed by the British government and subsequently Irish revitalized as part of the foundation of the Republic, signifying Irish national and cultural identity. Irish is a national language and is a compulsory subject for most pupils in Irish schools. English is the commonly spoken language of everyday life and the mother tongue of approximately 90% of the population. Approximately 2.5% of the population speak Polish as their first language. The Irish Traveller community (less than 1% of the population) have their own language, known as the Cant, or Gammon.

In the mid-1990s a trend of outward migration was reversed by the return of many Irish migrants due to an economic boom. With European Union (EU) enlargement in 2004, this trend of immigration became dominated by migrants from other EU countries, particularly the new accession States (Smyth, Darmody, McGinnity and Byrne 2009, p.17). The number of non-Irish nationals arriving in Ireland peaked in 2006 and has decreased since then, but remains significant despite the economic collapse from 2008 onwards (Central Statistics Office 2012c, p.26). At the time of the 2011 census, there were 544,357 non-Irish nationals living in Ireland, which is

12% of the total population and a substantial increase from the 5.8% level of 2002. Between 2006 and 2011 the highest ever inter-censal period natural increase in population was recorded as 225,000 (365,000 births minus 140,000 deaths) (CSO 2012a, p.10), with the total population reaching 4,588,252 in 2011. Of this number, approximately 11% spoke one of 180 languages other than English or Irish at home (CSO 2012a, p.35 and CSO 2012c, p.27): 363,929 were foreign nationals (approximately 8% of the total population) and 145,919 were Irish nationals (approximately 3%). Of these foreign nationals, more than 30% spoke Polish, notably the most commonly spoken foreign language. Among the Irish nationals resident in Ireland who spoke a language other than English or Irish at home, the most commonly spoken languages were French, German and Spanish. According to the results of the 2011 census, 40.6% of the population self-reported as being able to speak Irish and 1.8% of the population aged 3 or over spoke Irish outside of the education system on a daily basis (CSO 2012d, pp.26-27). However, the Irish Language Survey of 2013, using more detailed questions, produced a higher percentage figure of 57% of the population being able to speak Irish (Darmody and Daly 2015, p.68).

The linguistic profile of the post-primary classroom

The linguistic profile of post-primary classes in Ireland has undergone a significant transformation over the last 20 years, reflecting the pattern of immigration into Ireland; furthermore the percentage of post-primary pupils who are learning through English as an additional language (EAL) appears to be growing. Byrne, McGinnity, Smyth and Darmody estimate that in Spring 2007, 70% of approximately 18,000 immigrant post-primary pupils were non-English speaking, that is approximately 12,600 pupils (out of 327,000) or less than 4% of the total post-primary school population (Byrne *et al* 2010, p.278). In 2011, 42,055 13-18 year olds (approximately 12% of the post-primary age group) did not speak English or Irish at home (CSO 2012a, p.36). The total number of 13-18 year olds in 2011 was 344,931 (CSO 2012b, pp.22-23). While not all of this age group will have attended school, which is compulsory only to the age of 16, many of these first generation immigrant pupils' parents are likely to encourage their children to stay at school for the senior

cycle as they tend to be highly educated and have strong educational aspirations for their children (Byrne *et al* 2010, p.274). "Over half of immigrants (54.2 percent) have university qualifications, compared with just over a quarter (27.3 percent) of the native population", (Ó Riagáin 2013, p.109). As bilingual pupils are fairly evenly distributed across post-primary schools, with 90% of schools reporting EAL pupils in attendance (Byrne *et al* 2010, p.279), the current typical classroom, which contains a heterogeneously multilingual minority, no longer fits the traditional monolingual or English/Irish bilingual model. It is clear that linguistic diversity is a mainstream issue in Irish post-primary education and that Ireland represents one example of the current worldwide trend of growing cultural, racial and linguistic diversity in schools (Miller, Kostogriz and Gearon 2009, p.3; Hammond 2009, p.56; Cummins, Brown and Sayers 2007, p.40; Commission Green Paper 2008/243/COM, p.2).

However, this diversity is not reflected in the staff room; Kearney points out "the mismatch between the homogeneity of the teaching cohort and the heterogeneity of the newcomer population" (Kearney 2014, p.84). While post-primary teachers in Ireland are mostly (at least) bilingual in English and Irish, they are subject specialists, mostly only teaching one or two subjects, usually through English. They tend to be "white, Catholic and settled" (Devine 2011, p.88) from farming, professional and managerial backgrounds. Initial teacher education is offered through undergraduate and postgraduate courses. The requirement that all post-primary teachers be Irish speakers, whatever the intended language of instruction, was relaxed more than ten years ago. This was a significant development, ending the gate-keeping exclusion of non-Irish speakers from the teaching profession.

The European Commission against Racism and Intolerance (ECRI) has highlighted the relevance to Ireland of ECRI General Policy Recommendation number 10, which includes that teaching staff be recruited from minority groups at all levels of education. The failure to acknowledge racism in Irish schools is a recurring theme in the literature (Haran and Tormey 2002; Kitching 2011; Devine 2011; Parker-Jenkins and Masterson 2013). Parker-Jenkins and Masterson quote a school inspector: "'I have visited hundreds of schools in Ireland and I have never seen policy on anti-racism'" (Parker-Jenkins and Masterson 2013, p.481).

Challenges arising from multilingualism in the classroom

> "what you get is someone telling you that our classrooms have changed, as if you needed to be told that, but not showing you techniques for teaching these students" (language support teacher quoted by Lyons and Little 2009, p.45)

The multilingual post-primary classroom in Ireland poses challenges for the teachers as well as the pupils learning through English as an additional language. Clearly, with potentially any combination of 180 languages being the mother tongue of typically 2 or 3, but possibly 10 or more pupils in a class of approximately 30, teachers cannot be expected to know the mother tongues of all their pupils. Teachers need strategies to help them support the linguistic as well as subject content learning of their EAL pupils (see chapters 3 and 4). These are the types of pedagogical strategies that are explored as classroom interventions in this project.

The post-primary classroom in Ireland is a unique multilingual context compared to classrooms in other majority English-speaking countries where English is also taught as an additional language; teachers and EAL pupils in Ireland face different challenges from those which arise in the UK, Canada, the USA and Australia. A similarly wide range of nationalities and language groups live in the UK, but many groups are arranged in separate dense clusters. In England EAL pupils are very unevenly distributed, ranging from 4.3% of the school population in the Southwest to 52% in inner London (Demie 2013, p59). Byrne *et al* suggest that in Ireland there is an absence of school segregation on the basis of nationality (Byrne *et al* 2010, p.281), although there is some "clustering" of nationalities in Ireland, for example immigrant families from Brazil in Gort, Co. Galway (Devine 2011, p.4). Modern Canada has a long history of English/French bilingualism with French-speaking areas such as Quebec in the east, set within a linguistic landscape of approximately fifty native indigenous languages (mostly spoken only in Canada). Recently, with immigration being actively encouraged in order to boost the population, around two hundred immigrant Heritage languages are also spoken daily in Canada (Conrick and Regan 2007, p.108). In the USA, the first language of a high percentage of school children is one of many forms of Spanish: Mexican, Cuban, Puerto Rican, Dominican, Central

American, Salvadoran, Nicaraguan, Guatemalan and Honduran (Lipski 2008). The U.S.A. provides separate English as a second language (ESL) education, from which non-native English speaking pupils have to be reclassified before they enter mainstream schooling. Children who speak African American English Vernacular may not be considered native speakers of standard American English (Valdés 2004, pp.106-107). English language learner enrolment in U.S.A. schools was 5.1 million in 2005, higher than the entire population of Ireland (Bailey 2007, p.3). Australia has ancestral linguistic groups, as well as recent immigrant minorities from thirty or more linguistic and cultural backgrounds, which may constitute up to 80% or 90% of pupil populations in cities such as Sydney (Hammond 2009, p.56).

Byrne *et al* point out that the diversity of nationalities in Ireland contrasts significantly with patterns of national groups in other European countries and that migrants to Ireland are "a heterogeneous group (in terms of nationality, ethnicity, and language skills as well as length of stay, cultural/religious background and legal status)" (Byrne *et al* 2010, p.286). In contrast, Turkish speakers are the largest minority language group in Belgium and in Flanders in particular, the Flemish speaking area of Belgium, the ministry of education is seriously concerned about the academic achievement gap between Turkish immigrants and natives (Agirdag, Jordens and Van Houtte 2014, p.10). On the other hand, in Germany an urban classroom would typically contain approximately 50% native German-speaking pupils, with the other 50% being made up of a wide variety of native language groups (Gogolin 2002, p.124). Clearly, different multilingual contexts present different challenges.

Teachers identify English as the key barrier to access to the curriculum for immigrant pupils (Kearney 2014, p.76). Research in the Irish context has shown that teenage immigrant pupils identify language problems as their primary difficulty in school in various areas: settling in initially (Smyth *et al* 2009, p.80), understanding informal language and the linguistic behaviour of their peers, such as "slagging" (Gilligan, Curry, McGrath, Murphy, Ní Raghallaigh, Rogers, Scholtz and Gilligan Quinn 2010, p.2), accent, academic English in the classroom, with teachers speaking too fast, difficult vocabulary, including idiomatic expressions and polysemy. Keogh and Whyte further report that many newcomers are unprepared for the experience of

suddenly becoming very much in the minority in Ireland, aware of their "differences" from the norm and that they start to question their identity. Language represents a significant difference, even for speakers of different dialects of English, who need support developing bi-dialect skills, as opposed to bilingual skills.

> In general, the immigrant students were very happy in school and received a lot of support from teachers. All of them stressed that they wanted to be treated equally and did not want to be differentiated from their Irish schoolmates. (Keogh and Whyte 2003, p.53)

Ní Laoire, Carpena-Méndez, Tyrrell and White report

> Discourses of difference, dependence, neediness and vulnerability permeate representations of migrant children in Ireland and this is communicated to children through the education system in particular. (Ní Laoire *et al* 2011, p.157)

So, on the one hand EAL pupils in post-primary schools may prefer to be left alone to integrate with their Irish peers, but on the other hand they need English language support to avoid educational disadvantage within the English medium context (see chapter 3). In 2015 Ireland agreed to accept approximately 4,000 refugees from the Middle East: "families and children who have been forced to leave their homes due to war and conflict" (Irish Naturalisation and Immigration Service 2015); the children among these refugees will certainly need English language support.

Darmody, Byrne and McGinnity report on how, in addition, various non-linguistic types of disadvantage can accumulate through post-primary education for immigrant pupils, beginning with enrolment, when recent newcomer parents "are less likely to possess country-specific strategic knowledge that can be used in choosing schools" (Darmody *et al* 2014, p.135). The admission policies of oversubscribed schools tend to favour settled communities: for example, top criteria include having siblings already in the school and the primary school attended (Darmody *et al* 2014, p.140; Byrne *et al* 2010, p.277). Religion is also a significant factor; "Under the Equal Status Act (Government of Ireland 2004) schools may . . . refuse to admit a child not of the school's religious ethos" (Parker-Jenkins and Masterson 2013, p.478). Mawhinney reporting on the case of Ireland suggests

> parents may feel compelled to compromise their own religious beliefs and give the appearance of being believers of a particular faith in order to ensure a school place for their child. (Mawhinney 2009, cited in Parker-Jenkins and Masterson 2013, p.484)

Once enrolled, EAL pupils may be placed in classes with younger pupils, as well as low streams where schools practice streaming, (DES 2012, p.51; Devine 2011, p.99). At senior cycle level, Darmody *et al* report that "migrant students were frequently steered towards the Leaving Certificate Applied programme" and that teachers and counsellors are not clear about what guidance they can offer migrant pupils about their future options regarding access to higher education although this is a vital role, which migrant parents are unlikely to be able to fulfil (Darmody *et al* 2014, p.145-147). To summarize, the challenges arising from the unique context of the multilingual post-primary classroom in Ireland are complex and diverse, involving challenges to the traditional identity of teachers, the development of adolescent identities, expectations of parents, cultural and religious norms, the inadequacies of the system to deal with the on-going situation, as well as the linguistic issues, which are discussed in chapter 3.

Irish government policy

This section describes the extent of the provision made by the Irish government primarily through the DES to address the issues raised by the recent changes in the linguistic profile of the post-primary classroom. It elucidates the level of English proficiency the DES deems as sufficient for bilingual pupils to be able to cope with the challenges of English medium post-primary education, includes an analysis of the two most recent circulars of 2007 and 2009 from the DES to school management about English language support, lists relevant background actions of the Irish government and finishes by suggesting the term "Englishualism" to characterize the underlying assumptions of government policy.

English as an Additional Language support to B1 level for two years

Currently, common practice in Ireland is that EAL pupils are placed in a mainstream class as soon as they enrol in a school, where they are obliged to learn curricular subjects through the medium of English in preparation for high-stakes examinations,

such as the Leaving Certificate. They are entitled to specialized English language support during their first two years of education in Ireland, which typically takes the form of withdrawal classes (Smyth *et al* 2009, p.122-129; Lyons and Little 2009, pp.26-34; Kelly 2014, p.858). The *EAL Post-Primary Assessment Kit* (Little, Lazenby Simpson and Finnegan Catibusic 2009) developed by Integrate Ireland Language and Training (IILT), supplied to all post-primary schools in early 2009 by the DES, is provided to measure EAL pupils' proficiency in each of the four skills: reading, writing, speaking and listening. Pupils who, according to these tests, achieve B1 level, based on the *Common European Framework of Reference for Languages* (Council of Europe 2001), are considered not to require EAL support.

The Council of Europe's global description of a B1 level language user:

> Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans. (Council of Europe 2001, p.24)

IILT's global benchmarks of communicative proficiency include these descriptions of a B1 level post-primary pupil:

> Can understand the main points of topics that are presented and texts that are read aloud in the mainstream classroom provided that key concepts and vocabulary have been studied in advance.

> Can read and understand the main points in texts encountered in the mainstream class, provided the thematic area and key vocabulary are already familiar or specially prepared in advance. (Little *et al* 2009, Appendix i, p.162)

The caveats included in these two paragraphs clearly state that EAL pupils with B1 level proficiency need support; their native English-speaking peers would not be expected to need to study in advance.

An analysis of circulars 0053/2007 and 0015/2009

Government policy is communicated to primary and post-primary schools in the form of circulars. A detailed comparison of the two circulars that communicate EAL

policy to schools, given below, highlights how English language provision has been envisioned and then curtailed.

An analytical comparison of the texts of DES circulars from 2007 and 2009	
Sub-headings of circular 0053/2007	Sub-headings of circular 0015/2009
Introduction (page 1)	1. Introduction (page 1)
Creating an inclusive school environment (page 1)	2. Creating an inclusive school environment (page 1)
The role of the language support teacher (page 1)	3. The role of the EAL support teacher (pages 1-2)
Assessment of pupils' levels of language proficiency (pages 1-2)	4. Deployment of EAL support teachers within schools (page 2)
Allocation of additional teacher support (page 2)	5. Primary and Post-Primary Assessment Kit (pages 2-3)
Useful materials and resources (page 3)	6. Allocation of resources for EAL support: 6.1 Schools with fewer than 14 pupils requiring EAL support (page 3) 6.2 New arrangements for allocation of full-time EAL support posts (page 4) 6.3 Alleviation measures for schools with substantial number of pupils requiring EAL support (pages 4-5)
Availability of support (page 3)	7. Important points to note when counting pupil numbers (page 5)
	8. Applications for EAL support for pupils beyond the 2 year period (pages 5-6)
	9. General (page 6)
	10. Application forms (page 6)
	Appendix (page 7)
Total number of words of circular 0053/2007 – 1,450	Total number of words of circular 0015/2009 – 2,647

Circular 0053/2007 states its purpose as assisting

> schools in providing an inclusive school environment to meet the needs of pupils for whom English is a second language and outline the resources that are available to assist schools in this task (DES 2007a, p.1).

This 2007 circular presents three proficiency levels; at level 3, which is described as "Has competent communication skills in English", pupils are no longer eligible for language support, which is "for pupils with significant English language deficits" (DES 2007a, p.2, emphasis in original). Although schools are encouraged to be flexible in their deployment of support, they are required to provide extensive details of each case when appealing for a third year of language support for a pupil. The "useful materials and resources" provided in circular 0053/2007 do not address language teaching; they mostly deal with intercultural issues at primary school. The circular directs schools to the IILT website for teaching resources and gives IILT's contact details. IILT closed down when its funding was cut in 2008, however the teaching resources are currently available on the National Council for Curriculum and Assessment website.

"English as an additional language (EAL)" is used in most instances in circular 0015/2009 (DES 2009) in place of pupils for whom "English is a second language". The introduction of 0015/2009 does not give a purpose for the circular, but rather explains a contraction of EAL support in schools, rescinding the previous circular (DES 2007a), due to financial constraints arising from decisions made in Budget 2009;

> the level of EAL support will generally be reduced to a maximum of two teachers per school, as was the case before 2007 (DES 2009, section 1).

Sections 2 and 3 are similar to their counterparts in circular 0053/2007; section 2, "Creating an inclusive school environment", remains unchanged apart from one small adjustment (which is evidence of proof-reading) in the sentence:

> Pupils should also be encouraged and facilitated to maintain a connection with their own culture and language through curricular activities and displays (DES 2009, section 2).

Neither circular give any guidance about provision for first language maintenance. There are some additions to the 2007 text of section 3, "The role of the language support teacher". The word "additional" in the first sentence of section 3 is changed

to bold print in the 2009 circular: "EAL support teachers are appointed to assist schools in providing **additional** EAL support teaching for pupils" and is followed by a new sentence:

> The EAL pupil remains the responsibility of . . . the subject specialist teachers at post primary level who will work closely with the EAL support teachers (DES 2009, section 3).

This highlighting of class teachers' role of providing linguistic support is reiterated in section 4 "in addition to the support they receive from the class teachers".

Circular 0015/2009 mentions training for EAL teachers in the use of the assessment kits, but no other mention is made in either of the circulars about teacher education or the source of the EAL expertise referred to in both texts. One sentence appears twice in the 2007 circular: once on page 1 and once on page 2:

> It is important that expertise is shared and good practice is communicated and disseminated in order to optimise the opportunities pupils have for developing their proficiency in English. (DES 2007a)

This sentence becomes

> They [EAL support teachers] share their expertise with mainstream class teachers and assist in developing and disseminating good practice to support the development of students' English language proficiency (DES 2009, section 3)

as a separate one-sentence-paragraph at the end of section 3. Section 4 of 0015/2009 allows schools flexibility to address their particular EAL scenario and recommends

> additional EAL support teaching in the classroom or in timetabled EAL lessons for small groups in addition to the support they [EAL pupils] receive from the class teachers. (DES 2009, section 4)

Section 4 also demands that all school personnel understand their clearly defined role in their school's EAL policy, which again "should promote the sharing of expertise and good practice".

Sections 5 to 10 and the appendix of 0015/2009 all concern the mechanics of calculating the figure a school may submit as the number of pupils eligible for EAL support, so as to be allocated EAL support posts, and how to appeal allocations. There is a weighting system in which one pupil does not necessarily count as one pupil. In the case of a school applying for a third EAL teacher, pupils who have

already received "between 1 and 2 years EAL support" only count as half a pupil (section 6.3). In any situation, pupils who have been granted EAL support beyond the two-year allowance only count as one third of a pupil (sections 7 and 8).

Education and language: legislation, publications and other government actions

The two circulars analysed above are the only direct instructions from the DES to schools about EAL provision. However, the Irish government has enacted legislation, established new bodies, published reports and guides, and funded studies, which have had a less direct influence on the multilingual post-primary classroom. These are listed below, to provide some background information around government educational policy over the last 20 years.

1995   Charting our Education Future: White Paper on Education

1998   The Education Act (amended 2007 and 2012)

1999   The Qualifications (Education and Training) Act

2000   The Education Welfare Act

2000   The Equal Status Act

2000   The Post-Primary Languages Initiative was launched

2001   Integrate Ireland Language and Training was established (closed in 2008)

2001   The Teaching Council Act (amended 2006)

2002   The Ombudsman for Children Act

2003   The Official Languages Act

2003   Looking at our schools: an aid to self-evaluation in second level schools

2004   The Equality Act

2005   Strategy statement 2005-2007

2006   The Teaching Council was established

2006   Towards 2016

2006   Intercultural education in the post-primary school

2007   Audit of school enrolment policies

2007   Ireland national development plan 2007-2013

2008   Statement of strategy for 2008-2010

2008   Migration Nation: statement on integration strategy and diversity management

2008   Consultation with education sector stakeholders in response to the European Commission green paper 2008

2009   Adapting to diversity: Irish schools and newcomer students

2010   Intercultural education strategy, 2010-2015

2011   Statement of strategy for 2011-2014

2011   Value for money review of EAL

2011   The Department of Children and Youth Affairs was established

2012   Looking at English as an additional language: teaching and learning in post-primary schools in 2008

2013   The Education and Training Boards Act

2015   Attitudes towards the Irish language on the island of Ireland

"Englishualism"

It is clear that the government's response to multilingualism in the classroom is focused on the English language; government policy involves some provision for teaching English as an additional language and adheres strictly to teaching through English (except in Irish medium schools and streams).   I suggest the term "Englishualism" to refer to this basic assumption that English must remain the language of instruction to the exclusion of all other non-national languages. Echoing this underlying assumption of government policy, teachers tend to see migrant pupils' bilingualism or multilingualism in deficit terms (see pp.35-36), in spite of their own bilingualism and the European ideal of plurilingualism.   With more than 180 languages spoken in Ireland today, multilingualism including in post-primary schools, reflects the wider international linguistic context.   Increasing global migration, particularly current immigration into Europe, is intensifying linguistic diversity. Ireland can prepare to meet and embrace this continuing and strengthening trend by following European Union directives and listening to researchers and commentators as reviewed in the next section.

However, the linguistic landscape of Ireland appears to be in a state of confusion; educational policy reflects an English-language-based monolingual perspective in an officially bilingual country, which in reality encompasses rich linguistic diversity and

is clearly multilingual. It is within this confused landscape that the irresistible force of multilingualism is meeting this apparently immovable object "Englishualism". This project proposes explicit instruction of academic English in all subjects, using techniques usually associated with language teaching as a way through this impasse, to benefit all pupils.

The European Union perspective

Ireland joined the European Economic Community in 1973. The Commission of the European Communities Directive 77/486/EEC laid down three objectives for the education of the children of migrant workers:

> to provide free tuition to facilitate initial reception, in particular intensive teaching of the official language or one of the official languages of the host country;
> to provide initial and further training for the teachers responsible for the children of migrant workers;
> to promote teaching of the mother tongue and culture of the country of origin.
> (Commission Report, 1988/787/COM, preamble)

This section outlines the considerable criticism about Ireland's implementation of these three objectives: EAL provision, teacher education and mother tongue maintenance.

EAL provision

The Organisation for Economic Co-operation and Development (OECD) published a Review of Migrant Education for Ireland in 2009, which makes it clear that the Irish government has responded to the need for English language support for newcomer pupils with policy initiatives, but has failed to fully implement these policies (Taguma, Kim, Wurtzburg and Kelly 2009, p.9). The literature on the Irish context portrays the government's response to the challenge of the multilingual classroom as insular, having been developed in isolation from academic research, and resulting in inadequate EAL provision in post-primary schools, with teachers "working within a policy vacuum" (Devine 2005, p.59; Lyons and Little 2009, p.81; Wallen 2007;

Wallen and Kelly-Holmes 2006, pp.157-158). The main issues of concern are: the two year limit on EAL support, the deficit view of immigrant pupils' linguistic abilities, the insecure status of English language support teacher posts and the lack of teacher education. The DES has more recently conceded: "the current model is not the most effective one" and that post-primary pupils

> need to develop both communicative and, particularly, academic language proficiency. The latter takes time and continuous support (DES 2011b, p.147).

"The continued cap of two years' language support for newcomer students means many of them will never achieve their potential" (Ryan 2009). See chapter 3 for a review of the Applied Linguistics literature, which supports this view. The DES has recognized the inadequacies of current EAL provision in schools:

> Given both the academic research and the practical application of language support on the ground, it is recommended that Departmental policy be revised to reflect the reality that language support does not end after 2 years in many cases (DES 2011b, p.147).

The rich resources of language and culture that EAL pupils bring to the post-primary classroom are not recognized by the national curriculum (Fionda 2014, p.59). Newcomers' bilingualism has been construed in negative terms; Ward highlights the deficit model of language acquisition found in official documentation referring to newcomer pupils as "non-national" or "non-English speaking" (Ward 2004, pp.30-37). Ó Riagáin highlights that schools assess only newcomers' English proficiency (or lack of it), focusing "on what immigrant students do not know" (Ó Riagáin 2013, p.125). Teachers also tend to assess migrant pupils negatively; despite being bilingual themselves, research shows that teachers generally fail to acknowledge or build on their EAL pupils' linguistic abilities (Lyons 2010; Devine 2011). For example bilingual dictionaries are uncommon at school (DES 2012, p.51). Instead, teachers perceive migrants as deficient in English (Kearney 2014, p.76). Because of this deficit view, teachers tend to have low expectations of bilingual pupils (Devine 2011, p.99; Lyons 2010, p.300) resulting in EAL pupils being placed in lower-age classes, low streams and being steered towards less academic senior cycle tracks, "often based on subjective recommendation of teachers" (Darmody *et al* 2014, p.147).

EAL posts are allocated school by school on a year to year basis and are inherently insecure. For example, a school with 31 eligible EAL pupils one year, but 30 the next will lose one full-time EAL support post for the second year (section 6.2 of circular 0015/2009, see p.29). The DES refers to "whole time equivalent" (WTE) EAL teaching posts at post-primary school, which equal 22 teaching hours that may be shared between multiple teachers. The number of these post-primary EAL WTEs increased each year from 2001 until funding was capped in 2008, from 113 posts in 2001/2 to 560 in 2008/9 (DES 2011b, p.124-125). Despite the increasing need, the situation has been treated as a temporary phase rather than recognized as part of the prevailing global pattern of widespread migration and increasing linguistic and cultural diversity internationally (Lyons and Little 2009, p.80; Wallen 2007; Mac Éinrí and White 2008, p.164). From a survey involving 103 English language support teachers (LSTs), Lyons reports 71% of these teachers were working "concessionary language support hours to supplement their timetables" and 79% had not chosen to be LSTs. 88% of the LSTs did not enjoy language support due to multiple associated challenges and only 9 of these 103 LSTs were teaching EAL full-time (Lyons 2010, p.294).

Despite the insecure and peripheral status of EAL teaching in schools, English language support teachers are expected to have expertise as expressed in the government circulars analysed above (see p.31), although many have had no specialised teacher education in English language teaching. "There is no specific mandatory in-service preparation in order to be considered an LST" (Murtagh and Francis 2011, p.3). In their value for money review, the Inspectorate comment:

> There is a mismatch between the funding available for EAL teachers' salaries (over €136 million in 08/09) and the funding available for their CPD (under €1 million in 2009). In 2008/09, expenditure on CPD was 0.7% of expenditure on teachers' salaries . . . teachers' salaries account for about 99% of total EAL expenditure. This contrasts with the experience in other jurisdictions . . . In Northern Ireland and in Scotland, over 15% of expenditure on EAL and inclusion goes towards CPD. (DES 2011b, pp.134-135)

Schools must also take responsibility for the "key features of effective EAL support provision" (DES 2009, section 4). Fionda conducted research in 10 Dublin post-

primary schools and found in many of the schools "the status of English language support appeared to be undermined by school organization and practice" (Fionda 2014, p.63), language learning and content learning were kept separate and that schools were not flexible in the use of their EAL funding. Fionda conducted case studies in three schools with differing EAL pupil representation: up to 7%, approximately 4% and almost 20%. The EAL policy of the first two case study schools indicated that English language support was not a priority in these schools; for example, language support teaching periods were used for homework supervision, also attended by native English speaking pupils in one school, and pupils entitled to English language support according to the DES regulations were unable to attend EAL classes because of incompatible timetables, in the other school. The third case study school, with an unusually high percentage of EAL pupils, had developed a successful English language support programme managed by an EAL coordinator and enthusiastically supported by the principal, with qualified EAL teachers who continued to support pupils according to their need rather than their official DES entitlement, in a school with a student-centred pedagogical approach promoting learner autonomy in all classes (Fionda 2014, p.67). Prioritising EAL provision like this seems to be rare; Lyons reports that only 13% of the 70 post-primary schools represented in his sample had an assigned EAL coordinator (Lyons 2010, p.294).

Teacher education

> The evidence points to a serious need for CPD. It is recommended that CPD should be provided to all teachers and school leaders in the primary and post-primary sectors on EAL and the inclusive/intercultural school. (DES 2011b, p.147)

Numerous writers have highlighted the need for this CPD and/or pre-service education for teachers in Ireland: Ward 2004; Healy 2007; Nowlan 2008; Lyons 2009; Smyth *et al* 2009; Taguma *et al* 2009; Devine 2011; Murtagh and Francis 2011; ECRI 2013; Kearney 2014.

> The scale and speed of this development [inward migration] have had the single most overwhelming impact on the working lives of teachers in the history of the state. (Kearney 2014, p.73)

For many teachers the challenge of linguistic diversity and the idea that they must teach English along with their subject, represents a completely new aspect of the teaching profession which they feel ill prepared and unequipped to perform (Keogh and Whyte 2003, p.48). "The majority of teachers trained at a time when Ireland was less culturally diverse" (Smyth *et al* 2009, p.143). Devine presents a picture of teachers feeling overwhelmed, uncertain how to cope and insecure about what they are doing with the EAL pupils in their schools (Devine 2005, p.59). Kearney reports her finding from 66 post-primary teachers in Dublin West (an area with an unusually high immigrant population), that 92% of her survey respondents and nine out of her ten interviewees "reported no training whatsoever in teaching newcomers" (Kearney 2014, p.81). The Inspectorate state that other than language teachers,

> specialist subject teachers at post-primary level will not have EAL skills or an understanding of their key role in supporting EAL students in enhancing their English language proficiency based on their initial teacher education.
>
> In this context, CPD both for EAL teachers and for mainstream class teachers at primary and particularly at post-primary level is essential. (DES 2011b, p.134)

The Professional Development Service for Teachers (PDST) was established as a support service of the Teacher Education Section of the DES in 2010 and incorporated the Second-Level Support Service (SLSS), which previously addressed EAL issues at post-primary school. At the time of writing, the most recent post-primary professional development schedule ended in 2013 and had no mention of EAL. The English Language Support Teachers' Association (ELSTA) offers workshops, an annual conference, a journal and resources through their website, but has been inactive since 2013.

Mother tongue maintenance

Ireland ratified the Council of Europe Framework Convention for the Protection of National Minorities (FCNM) in 1999. Council of Europe member states negotiate their implementation of the FCNM with the following cycles of engagement: submission of a report from the government, an opinion document from the FCNM Advisory Committee responding to the report, a document of comments on the opinion of the Advisory Committee from the government and finally a resolution

adopted by the Committee of Ministers of the Council of Europe, on the implementation of the FCNM in the country.
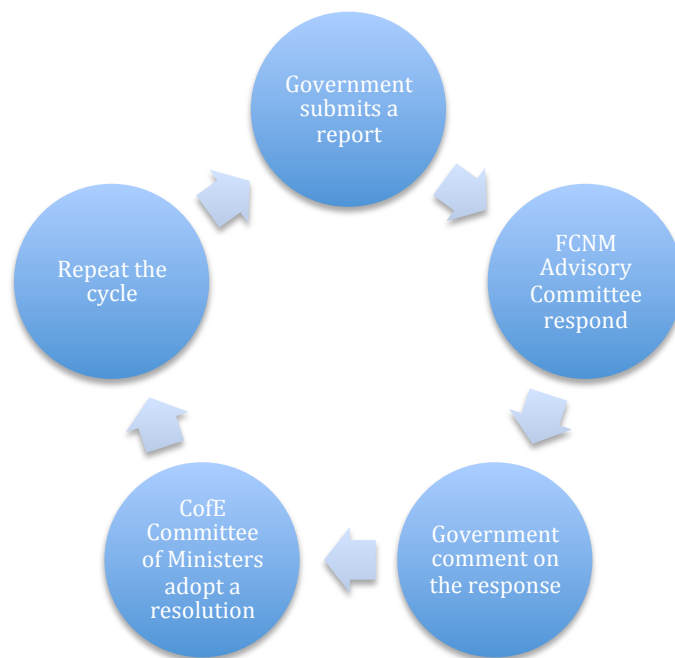
The Irish Government has completed three cycles of this process since 2001.

> The Irish Government attaches great importance to the Framework Convention on National Minorities. Ireland's ratification of the Convention is an integral part of the Irish Government's overall human rights strategy to advance justice and peace in Ireland. (Government of Ireland 2013, p.2)

Article 14 of the FCNM (Council of Europe 1995) begins "The Parties undertake to recognise that every person belonging to a national minority has the right to learn his or her minority language"; accordingly the Advisory Committee has urged Ireland to develop minority languages as education subjects. The Irish government's most recent response to this named French, German, Spanish, Italian, Russian, Japanese and Arabic as well as English and Irish as curricular languages being examined at Leaving Certificate level, and mentioned an additional 16 "non-curricular languages" available for EU pupils whose mother tongue is not English. No formal teaching is provided for these non-curricular languages, as they are not part of the post-primary curriculum (see p.19). In 2012, 1,495 candidates took Leaving Certificate examinations in the 16 non-curricular European languages (Government of Ireland 2013, p.15). In their FCNM reports, the Irish government has focused on the

ambiguity surrounding the term "national minority" and has concentrated on issues surrounding the Irish Traveller community.

Little identifies children's language rights as a main issue of the post-primary curriculum. At the time he was writing, the DES was funding mother tongue classes organized by immigrant communities for their children (Little 2003, p.20), but Little suggests that this is not enough. Currently, some minority language communities are providing mother tongue weekend schools for their children: for example, the Polish community (Polish is the second most commonly spoken language in Ireland after English) and the Lithuanian community, which is a much smaller, but significant minority language group. In August 2013, *The Irish Times* reported 24 Polish weekend schools in Ireland, attended by almost 4,000 children. Five of these schools are operated and financed by the Polish Ministry of Education, and nineteen are community schools, financed and operated by the communities themselves, with support from the Ministry of Foreign Affairs. The Lithuanian Association in Ireland organizes six Lithuanian weekend schools. While acknowledging the enormity of the challenge, the government appears to be evading their responsibility of mother tongue maintenance. No guidance is given to schools about mother tongue maintenance in the circulars concerning EAL.

> Given the diversity of cultures now present in Ireland, it is not possible to commit to teaching all mother tongues in mainstream education provision; communities, however, can adopt their own measures for teaching their language to interested parties. (DES and OMI 2010, p.47)

Reflection

Sketching the "pluricontexts" of the multilingual post-primary classroom in Ireland highlights some of the challenges and gaps in knowledge of this field of study. Particularly relevant to the aim of this project is the clear need for EAL teacher education. The mixed messages concerning EAL transmitted through government policy generate confusion, with teachers struggling to find direction. In this chapter I have demonstrated the shortcomings in EAL provision and surveyed the widespread criticism of the Irish government's response to immigration and multilingualism. I have suggested "Englishualism" as a term to characterise the government's

underlying attitude towards linguistic diversity in the classroom and shown that the education system in general persists with its traditional values of settled, white, Roman Catholicism. There is evidence of change, such as the introduction of transition year and the acknowledgement of a wider range of languages as curricular, or non-curricular but examinable, subjects, which indicates the government's awareness of the need for development. The opening of non-denominational schools such as the Educate Together primary and post-primary schools indicates a grassroots awareness of the need for change, particularly among parents. However, the considerable resistance via the teachers' unions to the Junior Cycle Student Award has highlighted disagreement between teachers and policy-makers. The Irish post-primary context is unique, complex and dynamic, but contained, as the economic recession and its consequences have curtailed any expansion of provision in line with demand and need. At the same time the government is criticised for misspending the funds which are available, and evading the country's responsibilities towards migrant workers and their children. These criticisms gain weight in the light of research, not only into the particular needs of EAL pupils, but the need of all pupils, to develop their academic English. This perspective from the educational and applied linguistic literature is discussed in the next chapter.

Chapter 3 – Post-primary level academic English development: perspectives from the literature

> Language has long been understood to play a central role – perhaps *the* central role – in teaching and learning. (Bunch 2013, p.299, emphasis in the original)

Introduction

There is considerable support in the literature for the view that language is highly significant in education because it is an integral part of knowledge and learning. Halliday refutes the view that language is just one learning domain, asserting that "language is the essential condition of knowing, the process by which experience **becomes** knowledge" (Halliday 1993, p.94, emphasis in the original). Vygotsky states an "indisputable fact of great importance: Thought development is determined by language" (Vygotsky 1986, p.94). Christie exposes the tendency to discuss different types of development: cognitive, affective, social or emotional, as if they are independent of language, asserting that such mental abilities "do not exist apart from the behavioural patterns, including in particular the patterns of language, in which they are realised" (Christie 1985, p.23).

This chapter reviews various perspectives on academic English, starting with the emergence and development of the theoretical construct over the last half-century, and continuing with the subsequent discussion around defining the term. Then some basic assumptions of this study are addressed: that it is realistic to expect recommendations from this project to be applicable to the mainstream educational context of Ireland, and that academic English development is possible and feasible in post-primary classrooms. This is followed by a review of the position that academic language pedagogy is a necessity, with suggestions for classroom applications. Insights gained from the literature are applied to the context of this study in reflections at the end of the different sections of the chapter, following the action research methodology of reflection, planning and action. This chapter highlights the close association of academic English, the subject of this study, with concerns about

educational injustice and explains the choice of action research methodology for this project, a methodology which lends itself to resolving social justice issues.

The ontogenesis of the term "academic English"

> education can routinely repress, dominate, and disempower language users whose practices differ from the norms that it establishes. Furthermore, it can do this while concealing the relations that underlie its power and while conveying a reality that can be highly partisan. (Corson 1993, p.7)

This section traces the emergence of the construct "academic English" from research into the question of how long newcomer bilingual pupils take to develop age-appropriate language proficiency for schooling. Findings from this research area identify multiple disadvantages for non-native English speaking pupils at school. Other research shows native English speaking pupils who are not familiar with academic language to also be disadvantaged, compared to pupils who are more familiar with school registers.

Concerns about disadvantaged bilingual pupils

The theoretical construct of academic English, and academic language generally, began to emerge in the work of Cummins in the area of bilingual education, as he highlighted the significance of language in education and showed how bilingual pupils can be at a disadvantage when learning through a language which is not their mother tongue. In 1979, Cummins' purpose in coining the terms "basic interpersonal communication skills" (BICS) and "cognitive/academic language proficiency" (CALP) was to show that this

> distinction highlighted the fact that educators' conflating of these aspects of proficiency was a major factor in the creation of academic difficulties for bilingual students. (Cummins 2000, p.58)

The coining of these terms marks a significant step: the claim that "'language proficiency' is not a unitary construct" (Cummins 1981, p.132). Cummins cites Skutnabb-Kangas and Toukomaa (1976), who show that the conversational proficiency in the Finnish and Swedish languages of Finnish immigrant children in

Sweden belied these children's below average academic language proficiency in both languages. Cummins found that newcomer immigrants learning English as an additional language generally acquire BICS within two years of exposure to English. On reanalysing data from the Toronto Board of Education survey used by Ramsey and Wright (1974), taking into account the length of time the immigrant children had lived in Canada, Cummins found that it took at least five years, on average, for immigrant children who arrived into this Canadian context at age six years or older to approach grade norms at school of CALP in English (Cummins 1981, p.148). The BICS/CALP distinction

> was not proposed as an overall theory of language but as a conceptual distinction addressed to specific issues concerning the education of second language learners. (Cummins 2000, p.73)

Cummins' work highlights ways bilingual pupils may suffer educational injustices. Teachers who are unaware of the different amounts of time needed for newcomer international pupils to acquire BICS and CALP in English, may mistake their pupils' conversational competence as overall proficiency and so fail to recognize that when these children struggle with their school work, the cause is more likely to be linguistic than cognitive. For evidence of this kind of mistake and the tendency to place EAL pupils in low streams in the Irish context, see chapter 2 (p.35). Cummins points out that

> psychological or educational assessment of immigrant children in their L2 [second language] within their first five years in the host country is likely to seriously underestimate their potential academic abilities (Cummins 1981, p.148)

however, little effort is made to attempt to assess minority pupils in their first language (L1). (Cummins 1984, p.8).

In the North American context Cummins characterizes educational injustice in terms of the "coercive relations of power" displayed in xenophobic discourse (Cummins 2000, p.4). Cummins presents potential solutions to the unfavourable situations facing bilingual pupils on two levels: macro-interactions between dominant and subordinated communities in the wider society and micro-interactions between individuals, particularly the teacher and the pupil in the context of transformative pedagogy. A teacher-pupil relationship can either reinforce coercive relations of

power or promote collaborative relations of power to encourage a positive pupil identity leading to academic success. "Our interactions with students are constantly sketching a triangular set of images" (Cummins 2000, p.48).

Images of identity, which are constantly being negotiated in the classroom

```
        teachers' identities  ←——————→   the identities
                                          teachers encourage
                                          pupils to develop

                  ↖                            ↗

                        the society pupils
                          will help form
```
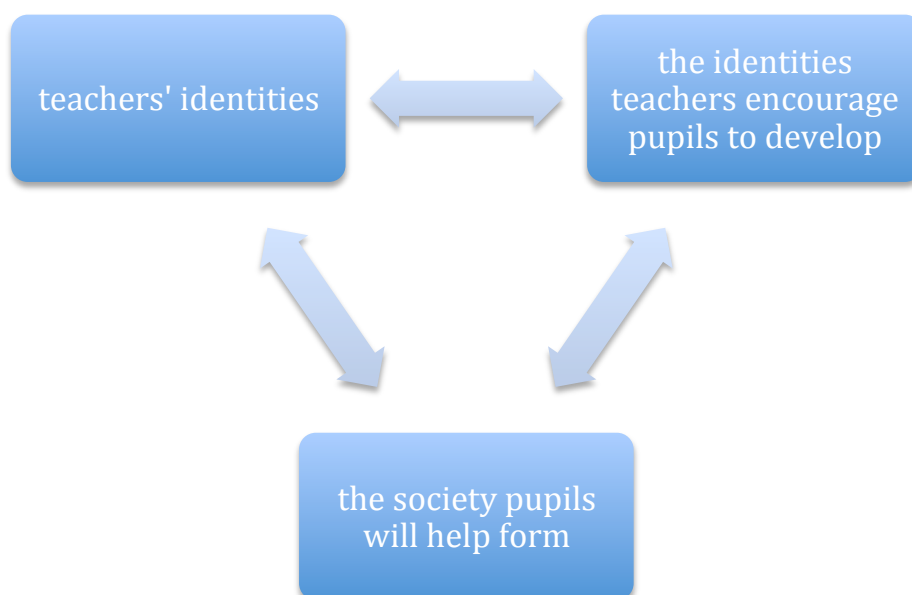
Teachers can prepare pupils to participate actively and critically in society by creating learning environments in their classrooms that reflect the values of democracy; such educational justice motivates Cummins' work.

While the BICS/CALP distinction has met with some criticism, (Edelsky 1990; Scarcella 2003; Wiley 1996), Cummins's work provided an important foundation for further research in educational linguistics. Collier investigated second language for academic purposes acquisition by the full range of school age pupils, from 5 years old to school leavers, also within the context of the USA. Unlike Cummins (1981) and Snow and Hefnagle-Hohle (1978), who used the same language measures across all ages to show absolute gains, Collier used the results of mainstream age-grade appropriate tests, the Science Research Associates (SRA) Achievement Series of reading, language arts, social studies, science and mathematics taken in grades 4, 6, 8 and 11 (at approximate ages 10, 12, 14 and 17 years old respectively). Collier and Thomas (1988) studied a situation similar to Irish EAL provision, where pupils were

immersed in English in their school with a small amount of language support "pullout instruction" (Collier 1989, p.524) and found that pupils of 8 to 11 years old on arrival, took 5 to 7 years to catch up with their native-speaking peers, and they projected that the 4 to 7 year old and adolescent arrivals would take 7 to 10 years to achieve average scores. This is longer than adolescent arrivals have remaining in school (Collier 1989, p.527). Collier found that when the medium of education is English, newcomers of the age-group 12 to 15 years "experience the greatest difficulty with acquisition of the L2 for academic purposes" (Collier 1987, p.635).

Collier's finding about the 12 to 15 age group would appear to contradict Cummins's common underlying proficiency (CUP) principle about the interdependence of bilinguals' L1 and L2, which states that instruction developing literacy skills in the L1 is

> also developing a deeper conceptual and linguistic proficiency that is strongly related to the development of English [L2] literacy and general academic skills. (Cummins 1984, p.143)

Cummins claims that these skills can transfer between L1 and L2 when pupils are motivated and gain enough exposure to both languages. However, transfer of literacy and academic language knowledge does not necessarily happen automatically, there is also usually "a need for formal instruction in the target language to realize the benefits of cross-linguistic transfer" (Cummins 2000, p.39). These skills are part of academic language and include higher order thinking skills such as analysis, synthesis and evaluation, reading strategies and writing composition skills. The bilingual pupils of the 12 to 15 age group in Collier's study should already have literacy-related skills in their L1, which can transfer to English through their underlying cognitive/academic proficiency and so make academic English acquisition easier for them than it is for the 8 to 11 age group. However, Collier supports Cummins' hypotheses and explains the finding that 12 to 15 year old newcomer pupils find EAL more difficult than other age groups by citing

> the schools' greater demands on students at the secondary level and the limited length of time LEP [limited English proficiency] secondary students have to reach those levels (Collier 1987, p.633)

in addition to the fact that these pupils were not receiving L1 content instruction.

Hakuta, Butler and Wit (2000) found that academic English proficiency can take 4 to 7 years to develop. They used data from two school districts in California, U.S.A., celebrated for their successful teaching of English to English language learners, with two more sets of data from the Toronto area, Canada, for corroboration. They conclude "[t]he data would suggest that policies that assume rapid acquisition of English . . . are wildly unrealistic" (Hakuta *et al* 2000, p.13).

More recently, Demie has addressed how long it takes EAL pupils to acquire English fluency in order to gain full access to the curriculum in the UK. She notes that previous research in North America (Collier 1987, 1989, 1992; Cummins 1981, 2000; Hakuta *et al* 2000) has shown that it typically takes pupils 5-7 years to catch up with their native-speaking peers. In Demie's study using evidence from one inner-London local authority, progress in English is described using four stages, based on Hester, Barrs and Kelly (1988). The stages range from "new to English", through "familiar" and "becoming confident" to stage 4, which is "fully fluent in English" describing bilingual pupils "who do not require additional language support" (Demie 2013, p.63-4).

> Our findings are similar to those of North America and show that it makes more sense to set aside the 5-7 years of primary and secondary schooling as a reasonable time frame for students to gain English proficiency. Overall, this study suggests to policy-makers and school leaders that they need a long-term view and a long-term set of expectations about the learning and support of EAL pupils. (Demie 2013, p.66)

Demie concludes that language barriers remain a key factor affecting the performance of EAL pupils in English schools (Demie 2013, p.67).

Linguistic research, then, clearly demonstrates that post-primary level academic English takes considerably longer than everyday English for non-native speaking pupils to master to a level where they can perform with peer-appropriate competence, even though pupils may be fluent in casual conversation. Cummins asserts that host countries (like Ireland) offering two years or less of English language support are not basing this time period on evidence from research and may not be meeting immigrant children's needs (Cummins 1981, p.148). Demie states in the UK context:

> More needs to be done to help English learners to achieve education equality with native English speakers in the classroom. (Demie 2013, p.67)

Ireland is comparable to the UK in that 180 or more languages are spoken as mother tongue by school children, and policy is to support English as an additional language acquisition as the language of education. Irish policymakers disregard evidence provided through applied linguistic research into academic English. Lyons refers to Bourne's image comparing language minority migrant pupils in Ireland to the "barium meal in the X-ray", "showing up deficiencies in the schooling system that affect the progress of all students" (Lyons 2010, p.301). In the U.S.A. the introduction of the Common Core State Standards (CCSS) in 2010 has also had a "barium meal" effect, with much of the recent scholarship about academic English from the U.S.A. context being a response to the linguistic demands of the CCSS. Before that, the No Child Left Behind Act of 2001 required English language learning pupils' progress to be assessed, which also provided a focus for research. Within this U.S.A. context, Wong Fillmore and Snow stated their position on how long academic English development takes:

> Academic language is learned through frequent exposure and practice over a long period of time-from the time children enter school to the time they leave it. (Wong Fillmore and Snow 2002, p.29)

Similarly, in the European context, Beacco, Fleming, Goullier, Thürmann and Vollmer state that pupils who have achieved proficiency in everyday communication

> need targeted support for the advancement of academic literacy up to the end of mandatory schooling – even up to the university entrance level. (Beacco *et al* 2015, p.53)

Concerns about disadvantaged native English speaking pupils

> participating successfully in academic discourses appears to be challenging for many colloquially fluent students who, inside or outside of school, may not have been granted ample opportunities to be socialized into more academic ways of using language. (Uccelli, Barr, Dobbs, Phillips Galloway, Meneses and Sánchez 2015, p.1081)

Educational injustice exposed in the light of the theoretical construct "academic English" has also been related to the socio-economic status and/or the socialization of native English speaking schoolchildren. Schleppegrell asserts that native-speaking middle-class children are at an advantage over their peers because the English they are familiar with from their home background is similar to academic language used at

school. Pupils who are not familiar with school-based language have to make a greater adjustment when they enter school than pupils "whose cultural practices are similar to those of the school" (Schleppegrell 2004, p.6). If the school fails to acknowledge this adjustment and/or offers no assistance, or interprets pupils' difficulties as lack of cognitive ability (as seen with EAL pupils, see p.35) pupils may be vulnerable to school failure.

Gee uses the terms "authentic beginners" and "false beginners". Authentic beginners come to a learning site without the "early preparation, pre-alignment in terms of cultural values, and sociocultural resources" of more advantaged learners (Gee 2004, p.14). False beginners are advantaged because they come from homes that resonate with schooling: "usually middle class" (Gee 2004, p.14). In early school, Gee suggests that teachers may fail to teach things that the false beginners already take for granted, as they assume that all the children should know these things. Gee problematizes the concept of "catching up":

> we set the "norm" in terms of the performance of the most advanced false beginners and then pretend that learners making quite "normal" and adequate progress, by any rational standards, are not "really learning". (Gee 2004, p.15)

Corson highlights educational injustice stemming from linguistic behaviour, using Bourdieu's metaphor for culture as an economic system; individuals have resources of culture, "cultural capital", which they use within the social system. Cultural capital represents

> culturally esteemed social advantages that people acquire as a part of their life experiences, their peer group contacts, and their family backgrounds: such things as 'good taste', 'style', certain kinds of knowledge, abilities, and presentation of self. (Corson 1993, p10)

"Linguistic capital" is an important part of this cultural heritage. Linguistic capital includes the ability to use language appropriately in different "linguistic markets", to recognize and utilize linguistic norms, to select the right language at the right time.

> Bourdieu argues that while the cultural or linguistic capital that is valued in schools is not equally available to children from different backgrounds, schools still operate as if all children had equal access to it. (Corson 1993, p.11)

Schleppegrell argues that children from middle-class backgrounds with highly educated parents are likely to have been exposed to language patterns used at school

and are likely to be able to recognize that it is appropriate to use that language in the school context. However children whose parents did not progress to higher education are less likely to be familiar with academic language and/or less likely to recognize that they are expected to use that language at school. Schleppegrell claims that children who use less valued structures and forms are judged as being less competent; a pupil's text that does not signal understanding of the school context may be seen as lacking coherence and the pupil may be seen as not responding adequately to the situation of schooling. Conversely it is familiarity and prior experience with language that guides the linguistic choices of all children, so teachers who misjudge pupils because of their unfamiliarity with the language of schooling, may need themselves to develop greater linguistic awareness and understanding.

It is too simplistic to assert that working class infants are not exposed to academic language and that middle class infants always have an educational advantage. There is evidence to show that the majority of families across the socio-economic status spectrum provide similar grounding for later academic success. For example, Snow and Beals report that norms of family mealtime conversations, which contribute to later success at school of pre-schoolers, are demonstrated by low-income families with low parent education levels as well as middle-class families (Snow and Beals 2006, p.55). However, familiarity with academic English increases the likelihood that children will produce school-appropriate language. Snow, Cancini, Gonzalez and Shriberg (1989) conducted research with primary aged children, who were asked to say what a simple familiar noun meant; some understood that they should give a formal definition, while others demonstrated their understanding of the noun, but used more conversational forms. Middle-class children tended to give formal definitions. Snow also demonstrated that non-native speakers who had been taught in English and had practiced this form were able to produce it. Snow presents findings from this research (Snow 1990, p.708) suggesting that practice in giving definitions influences definitional skill, a school-based activity. Schleppegrell (2004) argues that children who are in a position to make the linguistic choices necessary to produce expected and valued forms of academic language at school, in this case the formal definition, are seen as being successful and more able than other children who fail to meet the expectations of the school context and may be seen as slow or backward.

However, it is not a matter of cognitive ability, but a matter of familiarity with academic language.

Cumming offers an example, from a Canadian study of culturally diverse pupils receiving after-school tutoring in literacy. An adolescent participant "Peter" is described as

> a white, English-dominant Canadian from an Irish-background family, but his written compositions, limited vocabulary, learning needs, and successes achieved through tutoring and tests proved to be fundamentally the same as those of his peers who were recent immigrants from Angola, China, Jamaica, or Pakistan. (Cumming 2013, p.145)

Peter is an example of a native speaker who, as a teenager, was still not familiar with school-based academic English at the outset of Cumming's project. Cumming reports that Peter got help in a form to which he could respond, but not from his regular school situation, which appears to have failed to address his linguistic issues. Schools should not fail in this way:

> school has to adapt to the learners (and not only the other way around). In other words the school has to meet them on their own territory or at least pick them up from where they are and bring them successively to higher levels of subject and language performance and thus to subject literacy. (Beacco *et al* 2015, p.28)

Reflection

Some general principles emerge from this review. Clearly it is unacceptable that children are the victims of the educational injustice highlighted by this research. Bilingual children who can converse normally in English may not have age-appropriate mastery of academic English, but their teachers may not realise that these pupils still need to catch up with their peers on the level of academic English. Native English speaking pupils who are not familiar with language forms used at school also need to be taught these forms before they are assessed on them. Uccelli *et al* offer initial steps in operationalizing academic language proficiency, and a measuring instrument, CALS-I, which they suggest could enhance teachers' "cross-disciplinary academic language consciousness" (Uccelli *et al* 2015, p.1101), (see pp.57-58 below).

While there are variables, which can affect the length of time taken to develop academic English, it is always a long process. Therefore pupils, teachers and policy-makers should have realistic, long-term expectations about it, which should be reflected in classroom practice. Bilingual pupils should continue to develop their mother tongue (see pp.38-40) as well as receive appropriate EAL support. From the teachers' perspective, language issues should be considered at the planning stage of every lesson. Pupils should expect help with such issues: for example, the stages of genres, genre-appropriate syntax and patterns associated with academic lexis, and pupils should be linguistically aware and feel entitled to ask for instruction when they are not familiar with language. From the policy perspective, time must be allowed for such instruction: classroom time, lesson planning time and teacher education time, both in pre-service and in-service programmes. The importance of teacher-pupil relationships should be acknowledged and valued by time being allowed for teachers to develop deeper relationships with each of their pupils.

School assessments and placements should account for pupils' linguistic backgrounds. It is not fair to test children on knowledge that they have not been taught. In the context of the U.S.A. education system, Bailey and her colleagues (see pp.58-60) attempt an initial mapping of the language demands of school to describe "age-appropriate mastery of academic English", so that assessments can gauge whether a pupil has the required English to be able to display the content knowledge the test is intended to assess.

The Irish context is unique, bearing similarities and differences to other English speaking countries. Bilingual children in Ireland are clearly not a homogenous group (p.23), and are widely and evenly distributed across post-primary schools (p.24). Teachers want help with the diverse and widespread challenge of multilingualism (p.24). Mother tongue instruction is provided by the language community, if at all, outside of mainstream schooling. The two year maximum for EAL support (p.35) is not supported by evidence from research. Teacher education to heighten awareness of linguistic issues might encourage teacher-pupil relationships to promote collaborative relations of power. Although these general principles can be applied, there is no one-size-fits-all solution and post-primary teachers need support in assessing and providing for the linguistic needs of each of their classes in their local context.

Problematizing a definition for the term "academic English"

> there is no simple definition of what academic language is. (Snow and Uccelli 2008, p. 112)

> It is notable that *academic language*, unlike the categories of written, formal and expository language, has no clear opposite. We start, then, from the assumption that language can be *more* or *less* academic – that is, furnished with fewer or more of the traits that are typical of academic language. (Snow and Uccelli 2008, p.115, emphasis in the original)

Perspectives on defining "academic English"

> Academic English is a complex concept that has been defined and operationalized from a variety of perspectives and for a variety of reasons. (Anstrom, DiCerbo, Butler, Katz, Millet and Rivera 2010, p.iv)

This section outlines various approaches to providing a definition or description of academic English. Anstrom *et al* highlight three primary challenges in defining academic English. The first challenge arises from the wide range of varying perspectives and multiple systems that exist for understanding the construct "academic English" (AE); they distinguish approaches with a primarily linguistic focus, from approaches emphasizing the social context of language use, and others which focus on the specific content area of the language. A second challenge in defining AE arises from the complexity of the construct. Features include the linguistic elements of: discourse, grammar and vocabulary; language modalities of: listening, reading, writing and speaking; and disciplinary content areas with AE becoming increasingly sophisticated throughout schooling. Thirdly, the literature about AE is far from uniform, with different definitions and discussions about AE varying in kind and completeness (Anstrom *et al* 2010, pp.4-5).

Terminology

Different writers use different terms for academic English, which they often refer to using initial letters: Anstrom, DiCerbo, Butler, Katz, Millet and Rivera (2010) and DiCerbo, Anstrom, Baker and Rivera (2014) use AE for "academic English". Bailey (2007) uses AEL for "academic English language". Uccelli *et al* (2015) use CALS for "core academic language skills", referring to one component of academic language, or "school-relevant language", or "academic language proficiency", which also includes "discipline-specific language skills". Schleppegrell (2004) favours "the language of schooling". Lemke (1990) contrasts "scientific English" to "colloquial English", both of which refer to English that can be used to talk about science in the classroom. Other scholars may use "scientific" with broader reference, possibly following Vygotsky's distinction between everyday and scientific concepts (see pp.86-87). Vollmer uses "scientific" to refer to the discourses of all disciplines beyond the context of school (p.56), while Vollmer's study of "academic language" (2006) applies to multiple languages, at least in the European context. The terms "literacy", "academic literacy" or "advanced literacy" may also be used to denote academic English development; "it is through literacy that academic English is advanced", (Scarcella 2003, p.10). Moje (2007) discusses "disciplinary literacy" (see p.64). In the primary school context, Bailey and Heritage (2008) identify School Navigational Language (SNL) and Curriculum Content Language (CCL) as components of AE. SNL is the language of classroom management and CCL is the language used for teaching and learning. Different conceptualizations of academic English "are neither mutually exclusive nor contradicting", rather they "share a recognition that the language of school exists and that this language is foundational to academic access and success" (DiCerbo *et al* 2014, pp.448-449).

To clarify, for the purpose of this study, EAL is seen as encompassing all forms of English for all situations, so academic English makes up only part of EAL. Academic English also exists independently of EAL. Academic English development is seen as relevant to all post-primary pupils in Ireland: those who learn through English as an additional language and those whose mother tongue is English.

The relationship of the terms academic English and English as an additional language, as adopted in this study
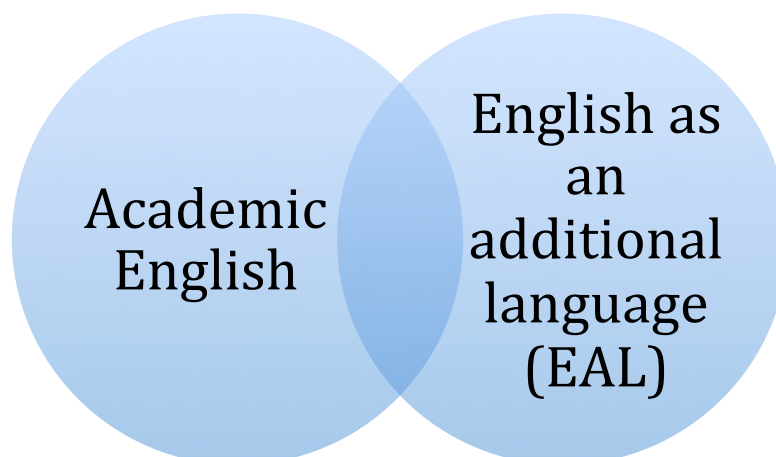
This relationship, as represented in the diagram above, is different from the position of some researchers. For example Anstrom *et al*'s description of AE is less inclusive, implying AE to be irrelevant to some native English speaking pupils: "Learners of AE fall along a continuum that includes non-native speakers, speakers of nonstandard varieties, and native speakers with little exposure to AE" (Anstrom *et al* 2010, p.v).

EAL (English as an additional language) is a term preferred to ESL (English as a second language), because many of the pupils, learning English while learning through English, already speak more than one language. EAL is preferred to EFL (English as a foreign language) because in English speaking countries, like Ireland, English is not a foreign language. EAL is used in Irish government policy documents. The term EAL also highlights the positive aspect of multilingualism, characterising EAL pupils as able, rather than using labels which project a deficit view (see p.30 and p.35). "EAL" is also an abbreviation for "essential academic language", (see p.61 below) but this is not used in this study, except where explicitly stated.

Level of specificity

Vollmer distinguishes between different levels of academic language at school: subject-specific language practices, domain-specific language practices and the more general academic register common to language use across the school curriculum. He places the specialised level of "scientific discourse" beyond the reach of school; this refers to the language used by practitioners of a discipline, for example biologists or theologians. Biology teachers and Religion teachers initiate pupils into their respective subject-specific language of schooling, which facilitates gaining access to the discourse community of their discipline after school. Domain-specific language practices in school are shared by a number of different subjects and their teachers, for example all natural science teachers (Vollmer 2009, p. 8).

Levels of specificity of academic English

General
academic English

Domain specific
English

Subject specific
English
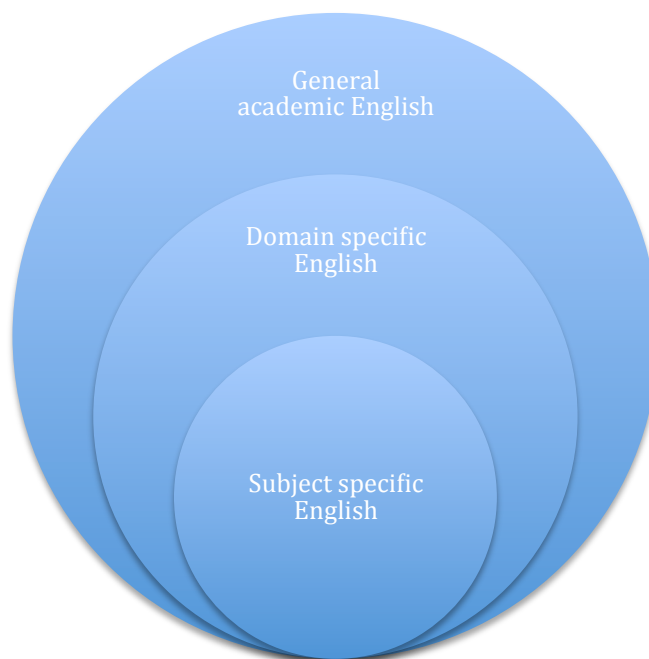
Core academic language skills

Uccelli *et al* (2015) also identify subject specific and general levels of academic English. They propose an expanded operationalization of the construct "academic language proficiency" from a cross-disciplinary perspective, which they call "core academic language skills" (CALS), defined as:

> knowledge and deployment of a repertoire of language forms and functions that co-occur with oral and written school learning tasks across disciplines. (Uccelli *et al* 2015, p.1079)

The language forms and functions of CALS are not learned as individual skills, but rather are seen as developing in synchrony with each other as they are used in school contexts. CALS constitutes an "essential common denominator" of academic language proficiency to equip pupils for school, but which is less likely to be explicitly taught than discipline-specific language skills, which they consider complementary and equally essential.

> *Discipline-specific academic language skills* refer to the different language forms and functions that highlight the key concepts and reasoning moves of specific disciplines. (Uccelli *et al* 2015, p. 1082, italics in original)

Uccelli *et al* compiled a map of "linguistic expectations and textual features characteristic of experts' academic texts across disciplines" (Uccelli *et al* 2015, p.1082), such as lexical precision, being concise and densely packed, and explicitly marking conceptual relations. As these features are often found in texts written for pupil readers, reading comprehension skills involve their counterparts. Uccelli *et al* introduce CALS, and the associated measuring instrument CALS-I, as works in progress, applied to the task of exploring the language skills related to reading comprehension at school. They name six areas of language skill, identified from previous research, which support skilled comprehension of academic texts:

1) Unpacking complex words
2) Comprehending complex sentences
3) Connecting ideas
4) Tracking themes
5) Organizing argumentative texts
6) Awareness of academic register

"We conceive of these proposed areas as an initial selection to begin to delineate an operational construct of CALS" (Uccelli *et al* 2015, p.1086).

Linguistic features

Returning to the perspective of bilingual pupils, Collier presents an overview of what EAL entails at school:

> Immigrants of school age who must acquire a second language in the context of schooling need to develop full proficiency in all language domains (including the structures and semantics of phonetics, phonology, inflectional morphology, syntax, vocabulary, discourse, pragmatics, and paralinguistics) and all language skills (listening, speaking, reading, writing, and metalinguistic knowledge of the language) for use in all the content areas (language arts, mathematics, science, and social studies). Language used in school is sometimes unique to that context, and it becomes increasingly abstract as students move from one grade to the next. Language is the focus of every content-area task, with all meaning and all demonstration of knowledge expressed through oral and written forms of language. (Collier 1987, p.618)

Collier's outline of what "full proficiency" for school involves, highlights the significant linguistic demands of second level education for English language learners and all pupils. Snow and Uccelli argue that

> academic language is intrinsically more difficult than other language registers and that thinking about the educational experiences that promote its development is a crucial task for educators of all students. (Snow and Uccelli 2009, p.114)

However, while Bailey has certainly set herself to this crucial task, she stresses the falsehood of believing that social language is inherently less sophisticated or cognitively demanding than academic language and suggests that the differences between BICS and CALP concern "relative frequency of complex grammatical structures, specialized vocabulary, and uncommon language functions" (Bailey 2007, p.9). This is similar to Halliday and Mathiessen's distinction between lexical density, a characteristic typical of written language, and the grammatically intricate nature of more complex instances of spoken language (Halliday and Mathiessen 2004, p.654). Bailey also suggests focusing on the situation of language use as social or academic, rather than the language itself, while admitting, on the other hand, that it is linguistic features that characterize different academic disciplines and their respective discourse communities (Bailey 2007, p.10).

Levels of language

Bailey's primary research interest is developing equitable school assessment of English language learner pupils (ELLs), with informing instruction and teacher professional development as secondary goals (Bailey 2007, p.xv). Bailey and Butler propose that English language development tests be comprised of social language, general academic language, and discipline or content-specific language components or modules (Bailey and Butler 2007, p.75). Bailey claims that research "has documented the existence of an AEL phenomenon" (Bailey 2007, p.12), which she defines as

> language that stands in contrast to the everyday informal speech that students use outside the classroom environment . . . on at least three key levels: the lexical, the grammatical, and discourse levels. (Bailey 2007, p.12)

She exemplifies these contrasting language features, on each of the three levels. Describing the lexical features of AEL, Bailey distinguishes general academic lexis (words such as: "evidence", "demonstrate" and "represent") from specialized content-related vocabulary ("diameter", "condense" and "abolitionist"). She also mentions the added complication of polysemy, that at least 60% of English words have multiple meanings. Some of the meanings of a word may be non-academic, while others may be academic, either specialized or general. Describing the grammatical features of AEL, Bailey gives examples of structures that are only found in formal discourse or in print, such as "X is greater than/less than Y" (Bailey 2007, p.14) and constructions that are less frequent in conversation than in academic writing, such as the passive voice, relative clauses and expanded noun phrases. Describing the discourse features of AEL, Bailey is referring to classroom discourse, both discipline specific and general academic organizational features, that may be used in speech or writing to meet teacher expectations. Bailey exemplifies different discourse features for different disciplines, showing how language use reflects "deep conceptual understanding of discipline-specific concepts" (Bailey 2007, p.15). In Mathematics the accepted norm of a good argument involves demonstrating a logical proof, while in English it requires citing primary and secondary texts, and in Science it might be explaining a process using a model. Bailey and Butler suggest, "perhaps a second-

language approach to teaching AEL would benefit native speakers and ELLs alike"
(Bailey and Butler 2007, p.92).

Systemic functional linguistics and the language of schooling

Schleppegrell argues, from the systemic functional perspective (see chapter 4), that
some descriptions of the language of schooling are inadequate, as they focus on
linguistic features and distract attention from the social contexts of language use.
Schleppegrell raises objections to the adjectives "decontextualized", "explicit",
"complex" and "cognitively demanding" when applied to school-level academic
language in the research context.

> It is the social contexts that need to remain at the forefront of our thinking about
> the linguistic challenges of schooling so that our approach to research and
> pedagogy can reveal the true expectations that the tasks of advanced schooling
> present to the diverse students in today's schools. (Schleppegrell 2004, p. 6)

Schleppegrell sees language as a social force as well as a social construct. Within the
social contexts of school, pupils need to know their options of linguistic choices to
successfully construe school meanings, success being bound up with choosing the
expected linguistic conventions that have come to be valued at school. Schleppegrell
compares written academic English with everyday conversational English.

Example features of academic English in written form	Example features of conversational English
Complex noun phrases	Pronouns
Verbs expressing logical relations within a clause	Conjunctions expressing logical relations between clauses
Highly structured, dense texts	Flexible negotiation of meaning between interlocutors
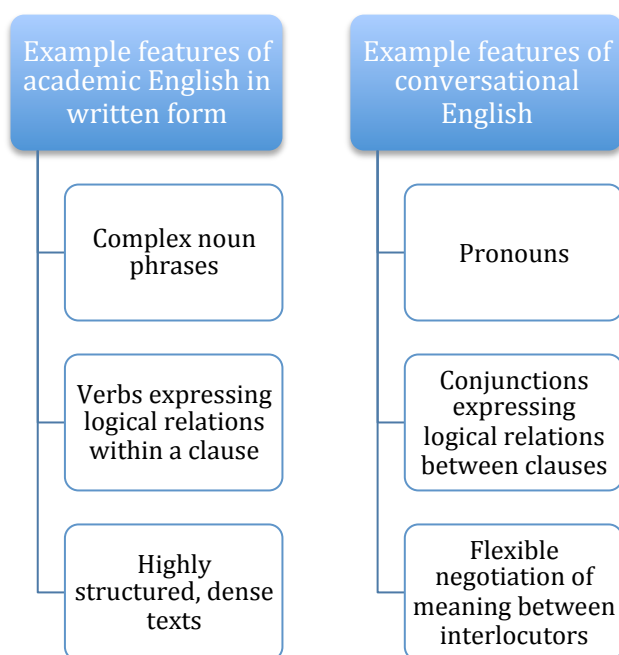
Schleppegrell proposes systemic functional linguistics as a comprehensive approach to analysing academic language. She shows how the written English texts of emergent bilingual pupils may draw on features of English conversation, for example, stringing multiple clauses together with conjunctions. Genre appropriate conventions, dense information, grammatical metaphor and a wide range of vocabulary are likely to be absent from their writing (Schleppegrell 2004).

Multi-dimensional analytical framework

Scarcella presents a detailed multi-dimensional framework for analysing academic English, aiming to represent the complexities and variables affecting its development. These include "multiple, dynamic, inter-related competencies" (Scarcella 2003, p.7) such as sociocultural understandings, as well as cognitive and strictly linguistic aspects, which students need to have mastered to progress through third level education. Scarcella's framework follows Kern (2000) who claims that to understand literacy, it must be studied from linguistic, cognitive, and sociocultural/psychological perspectives; "anything less is insufficient" (Scarcella 2003, p.10). Scarcella demonstrates how all-pervasive language is in all aspects of education.

In a later publication, Scarcella clarifies terms distinguishing types of academic language. "Foundational Knowledge of English", which she recommends be "delivered by specialists in intensive language programs" (Scarcella 2008, p.5), represents basic academic literacy including a wide vocabulary of high frequency words. School Navigational Language, is classroom management language, as proposed by Bailey and Heritage (2008). Essential Academic Language is "the basic features of academic language that are used *across all content areas*" (Scarcella 2008, p.5, emphasis in the original): academic vocabulary, grammatical structures and discourse features. Scarcella emphasizes the importance of background knowledge for learning, but stresses that English language learners should learn "subject specific content language along with their monolingual English-speaking peers" (Scarcella 2008, p.6) and not in ESL classes.

Scarcella's multidimensional framework for analysing academic English

Cognitive dimension
- knowledge
- higher order thinking (critical literacy)
- cognitive strategies
- metalinguistic strategies

Linguistic dimension
- phonological
- lexical
- grammatical
- sociolinguistic
- discourse

Sociocultural/ psychological dimension
- norms
- values
- beliefs
- attitudes/ motivations/ interests
- behaviours/ practices/habits

Academic English
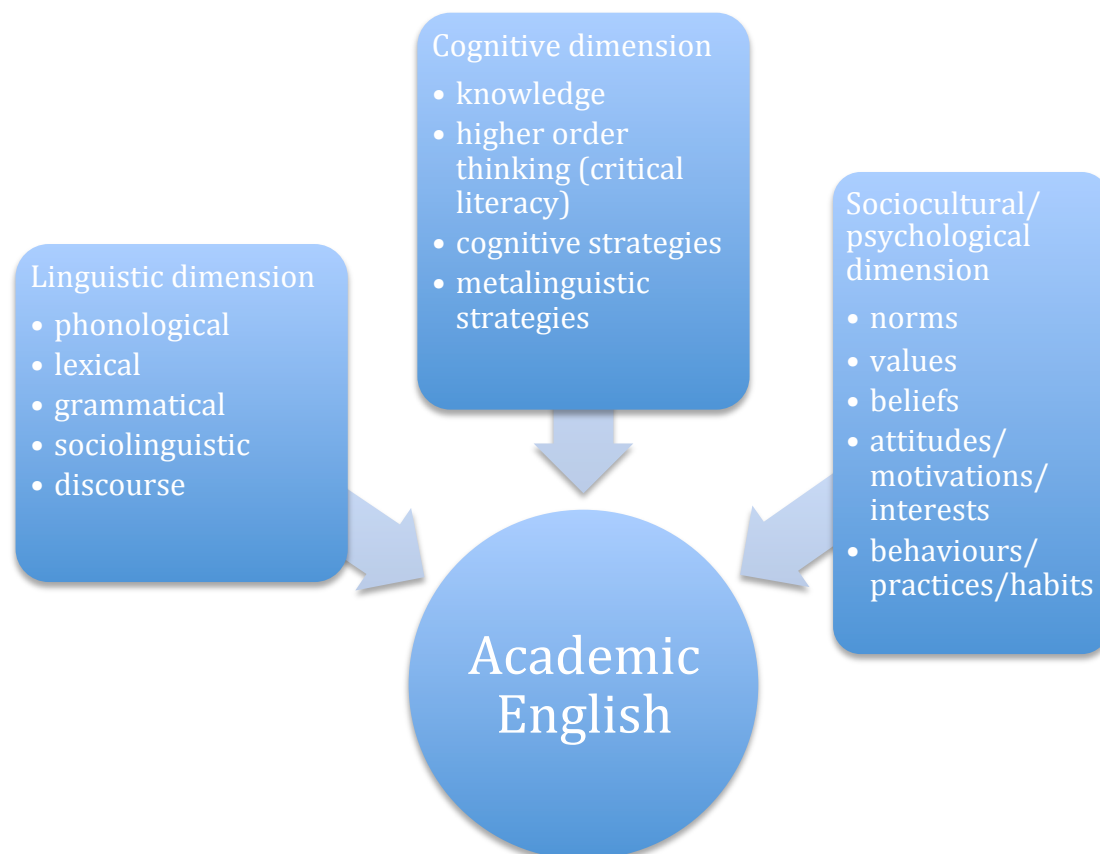
Thematic patterns

Focusing on the school science classroom, Lemke highlights the importance of pupils mastering thematic patterns: "the pattern of connections among the meanings of words in a particular field of science" (Lemke 1990, p.12) or "a way of picturing the network of relationships among the meanings of key terms in the language of a particular subject" (1990, p.98).

> Words do not necessarily "have" meanings in themselves. A word in isolation has only a "meaning potential," a range of possible uses to mean various things. What it actually means as part of a sentence or paragraph depends on which thematic item in some particular thematic pattern it is being used to express. (Lemke 1990, pp.34-5)

The thematic pattern associated with a topic is not a fixed set of words, it is a set of semantic relationships between thematic items, (often subject-specific technical terms). Lemke categorizes the basic semantic relationships into five groups: nominal relations, taxonomic relations, transitivity relations, circumstantial relations and the more difficult to label group of

> relations that tend to occur between whole sets of linked (or condensed) items: Cause/Consequence, Evidence/Conclusion, Generalization/Instance, and so on (Lemke 1990, p.97).

Talking science involves manipulating the words, or thematic items, within the thematic patterns to suit different situations, for example for discussing a problem orally or arguing a case in an essay. Lemke shows how semantic relations can be established by analogies and grammatical patterns. For example, "Electron comes to town, wants to go into the cheapest hotel" compared with "Electron enters an atom, needs to occupy the lowest-energy orbital", spoken by a science teacher in the classroom. "The key thematic items may be different, but the basic semantic relationships are not" (Lemke 1990, p.97).

An implication of Lemke's model of thematic patterns is that the subject teacher bears responsibility for developing pupils' academic English, in this case the science teacher develops pupils' ability to talk science.

> Science teachers belong to a community of people who already speak the language of science. Students, at least for a long time, do not. (Lemke 1990, p.x)

Genre theory identifies different patterns of school language in different subjects at the level of text (see pp.81-84). This also suggests that it is the subject teacher's responsibility to teach subject specific patterns. So then, there is no single "academic English", but multiple academic Englishes: one for each subject.

Multimodal academic literacy

Hull and Moje highlight the contemporary reality of literacy being multiple, encompassing the processing of images, multimodal and interactive texts, as well as the traditional decoding and encoding of extended logocentric texts. In school,

> academic language represents a specialized form of literacy [and] where reading and writing requirements vary according to knowledge domains and disciplines (Hull and Moje, 2012, p.52).

Academic Englishes

> Language learning is always part of subject learning, or to put it more radically, subject learning is always language learning at the same time. (Vollmer 2009, p.4)

Moje reports that studies, such as Wineburg 1991 (History) and Yore, Hand and Prain 2002 (Science), show that members of disciplines (historians and scientists) have "little conscious awareness of their ways of knowing and, particularly, of approaching texts" (Moje 2007, p.23). However, she demonstrates wide-ranging differences in the literacy skills required for reading and writing texts in different disciplines (Moje 2007, pp.11-12). Moje explains disciplinary literacy pedagogy as being based on the assumption that knowledge and thinking go hand in hand; becoming literate in a particular discipline involves developing both content knowledge and discipline-specific habits of mind simultaneously (Moje 2007, p.10). Habits of mind in History include approaching texts by analysing their context and scrutinizing the evidence they present, then producing explanation using reasoned argument.   English literature involves interpreting figurative language and recognizing literary devices and social systems of different historical contexts. Literacy in Mathematics involves integrating everyday language, technical terminology, symbolic notation and diagrammatic representations, with accuracy and precision. Science classes require pupils to predict explanations, observe and record results and draw conclusions.

Academic Englishes at post-primary level reflect the subject specific genres, ways of formulating an argument and underlying habits of mind of the disciplines to which they introduce pupils. The different academic Englishes of different school subjects may share academic language features on a general level, as proposed in CALS, but their subject specific features distinguish them from each other, reflecting the way practitioners of their discipline think and approach their subject.

> Academic registers are not just pretentious ways of using language that only serve to exclude the uninitiated. The kinds of meanings that are created in academic contexts often cannot be expressed in the language of ordinary interaction. Instead, school-based tasks require particular ways of presenting information: the ways construed through academic registers. (Schleppegrell 2004, p.137)

English native-speaker pupils have a huge advantage over international bilingual pupils in distinguishing between and selecting discipline-specific language. Cumming gives an example of a Japanese-background university student, "Rihoko", studying in English, who switched her major from architecture to chemistry, seemingly because the style of academic English writing she had developed, not using first-person pronouns to achieve scientific objectivity, did not suit architecture, which required her to express her own opinions (Cumming 2013, p.137).

> Teachers' expectations and students' skills vary not only by grade but also by discipline and specific genres within disciplines (Snow and Uccelli 2008, p.127).

Wong Fillmore and Fillmore argue that "academic language cannot be "taught" as a separate school subject" (Wong Fillmore and Fillmore 2012, p.65), but rather that pupils need to learn to notice how language is used in academic texts as they meet them in the subject classroom. Thus, every post-primary teacher has a responsibility to develop their pupils' subject specific academic English. This involves the levels of lexis, grammar and discourse. Considerations need to be given to oral as well as written language, and the receptive modalities of listening and reading as well as production. This may involve highlighting pronunciation or morphological issues, not usually considered in the mainstream subject classroom.

> Education in the language(s) of schooling is equally necessary [as in language as subject] in all other subjects, which are sometimes falsely considered as "non-linguistic" subjects (whereas in fact they are subjects with a "non-language content"). (Vollmer 2009, p. 4)

Reflection

Clearly "academic English" is a complex construct: wide-ranging and multidimensional. It is dynamic: an integral part of the expansion of knowledge. As such it defies definition. However, much can be gleaned from the above perspectives to inform academic English development in the multilingual post-primary classroom in Ireland. Many scholars describe academic English by contrasting it to conversational English (Bailey, Cummins, Schleppegrell) and this strategy can be utilised to heighten awareness and make the issue of academic English explicit. It may also be useful to distinguish different levels of specificity, particularly cross-disciplinary and discipline-specific language proficiency. Lists of linguistic features of academic language may help teachers in planning their lessons. Systemic functional linguistics provides a comprehensive theory of language to describe and clarify the features of academic English in general, and to map out the stages and appropriate language features of specific genres in particular (see chapter 4).

On the level of the individual post-primary pupil, academic Englishes are an integral part of learning the different subjects' content. Kibler addresses the perspective of pupil identity; a pupil may not want to take on the identity of a scientist implied by using the language of science and so may resist their teacher's efforts to develop their scientific language (Kibler 2011, p.221). Pupils may reject an identity associated with Biology, but willingly identify with Religion or Mathematics. When pupils are studying seven or eight different subjects, preparing for the Leaving Certificate examination, they are constantly switching academic Englishes and ways of thinking throughout the school day, along with their associated identities, while they may not be conscious of these repeated transitions. Clarifying the differences between different subject-specific Englishes as well as highlighting the similarities indicated by domain specific and general academic English may support pupils' metacognition of learning processes.

> Can the research on academic language be put to service in educationally meaningful ways? (Bailey 2007, p.1)

Interdisciplinary discussion about academic English at post-primary level is not a straightforward matter. A basic assumption underlying this study is that it is possible to bridge the gap between educators and researchers from different backgrounds, and in particular between the teaching of English as a foreign/second/additional language and the teaching of post-primary subjects in mainstream classrooms (see pp.11-13).

> The different existing perspectives on academic language and discourse bring into focus the complexities of the challenge involved in establishing objectives for the acquisition of academic English by minority second language learners. (Valdés 2004, p.117)

Kramsch explains how language teaching has changed since language educators started to look to Applied Linguistics for pedagogic guidance, as teachers abandoned the more traditional approach of using target language Literature to teach a language. They did this because of a change in the profile of language learners who wanted to learn everyday language, rather than study foreign literature:

> No longer limited to a corpus of literary texts, the current model of foreign language study now includes the ethnographic variability of language as it is used by native speakers in the variable practice of everyday life. (Kramsch 1995, p.2)

However, despite teachers' expectations of being able to apply linguistic theory in their language classrooms, Kramsch proposes a communication problem in language study, between the applied linguist and the foreign language teacher. The number of disciplines that each may draw upon for information has expanded, facilitating potential mutual enrichment through interdisciplinary communication, but also increasing the possibilities for misunderstandings. For example, misunderstandings can occur at the surface level of "buzzwords and shorthand verbal practices" (Kramsch 1995, p.1). Kramsch also highlights Halliday's influence on Applied Linguistics with the distinction of four overlapping objects of language study: language as system, of interest to language teachers; language as knowledge and thought, of interest to psycholinguists; language as behaviour enacted in a social context, of interest to sociolinguists; and language as art, of interest to literary scholars (Kramsch 1995, p.3). At a deeper level, Kramsch argues that language shapes the consciousness. For example, since the 1960s, Krashen's widely used "input" metaphor for language to be learned (proposed in second language acquisition, but originally taken from electrical engineering), precluded discussion of language learning from the "cultural competence" or "foreign discourse competence"

perspectives, as these models were not compatible with the dominant "input" image. Kramsch suggests that applied linguists and language teachers need to reflect upon and problematize how they themselves use language within their disciplines and how their respective disciplinary discourses have been shaped by historical and social forces, so that (more important than the answers) they can understand the different questions that are asked within each discipline.

Valdés also emphasizes "the multi-voiced nature of the academic discussion surrounding academic language" (Valdés 2004, p.112). She contrasts the different perspectives of different professional communities of English teachers in the context of the U.S.A.: mainstream English teachers addressing the needs of native English speaking pupils, and English as a second language (ESL) teachers and bilingual education teachers, both addressing the needs of bilingual pupils at primary and secondary levels, as well as TESOL (teaching English to speakers of other languages) practitioners at tertiary level. English language learning (ELL) bilingual secondary pupils in the U.S.A. are generally placed in separate classes from the native speaking mainstream until they are reclassified as fluent English speakers. However, bilingual pupils prepared within the ESL framework may never be ready for mainstream English classes according to the mainstream English teachers' perspective. Pupils may get trapped in ESL or sheltered classes throughout their school life because their teachers' view of academic English differs from that of the mainstream English teachers (Valdés 2004, p.117-118). In such sheltered classes, pupils do not meet complex texts of academic English, but are given simplified texts; this precludes academic English development (Wong Fillmore and Fillmore 2012, p.65). For native speaking pupils academic English development includes producing stylistic conventions without any linguistic errors; from this perspective, academic language is "free of non-standard or stigmatised features" (Valdés 2004, p.110) which might transfer from non-standard English or another language.

This misfit of definitions that Valdés identifies as needing to be resolved has a direct effect on bilingual pupils. Valdés highlights this educational injustice, naming the lack of success of L2 pupils a "national scandal" (Valdés 2004, p.123) and suggests that members of the various communities of professional English teachers need to learn about each other's work so that they will be in the same communication sphere

(Valdés 2004, p.120). She applauds researchers, such as Bartolomé, working on both literacy and the education of linguistic minority children, who provide "important and exciting links between L1 and L2 research" (Valdés 2004, p. 115).

This study draws upon various disciplines within Applied Linguistics as well as educational theory to inform academic English pedagogy in the post-primary subject classroom. Following Kramsch and Valdés, it is important to consider how this research would, or even could, be received by those it is intended to inform (teachers, teacher educators and policy makers). For example, the aspects of academic genre and associated grammatical forms can be overlooked in teachers' preoccupation with the aspect of vocabulary. As an outsider researcher, from an English language teaching background, I have to communicate and discuss the interventions implemented in the study with post-primary teachers and elicit their reactions and evaluation of the teaching techniques along with their opinions of the printed out guidelines I provide to communicate those techniques. Teachers in Ireland bear heavy workloads and do not have a lot of spare time to read demanding and seemingly irrelevant linguistic "advice" about an issue that they may believe they are already addressing. Any material written for serving teachers needs to be immediately relevant and useful. Such material would most valuably be communicated through in-service workshops where teachers could engage with the issues around academic English through discussion with each other and an applied linguist. Initial teacher education should also include applying theory about academic English to each teaching practice classroom at subject level, as well as raising awareness of domain specific and cross-curricular academic language.

In terms of Kramsch's insights about Halliday's influence, this study's sociolinguistic concerns with academic English as a social justice issue, are bound up with language as behaviour enacted in the social context of the school and as a "social force" (Schleppegrell 2004, p.6), and this study's psycholinguistic interest in the measurement and assessment of academic English, associates language with knowledge and thought. Holding such perspectives together, with the overall aim of supporting mainstream teachers' classroom practice, demands reflection on the way language is used in this research and reflection on the historical and social context, (which is presented in chapter 2). The "Englishualism" suggested (p.33) as an

underlying attitude of policy makers and the education system in general is an important aspect to be considered in the light of these observations. The presentation of insights, recommendations and/or findings to post-primary teachers, teacher educators and policy makers must raise awareness of the issues surrounding multilingualism in Ireland and the importance of academic English for all pupils. Materials for teachers must be readily usable. Paying attention to the sort of communication problems highlighted by Kramsch and Valdés from within their contexts will help avoid similar problems developing within this context in Ireland.

Problematizing academic English pedagogy

This section discusses whether it is possible on the one hand, and whether it is necessary on the other hand, to develop the academic English of post-primary pupils through explicit linguistic instruction, thus questioning basic underlying assumptions of this study. Demonstrating the consensus of opinion that academic language development is important, it goes on to discuss the need to heighten awareness of this issue, from various perspectives, but with a social justice rationale and finally to discuss possible classroom applications.

The possibility and necessity of academic English pedagogy

> What I am questioning is whether academic language can, in fact, be taught or learned effectively in the self-contained, hermetic universes of ELL classrooms. (Valdés 2004, p.123)

As mastery of academic English is closely associated with a child's home culture: social class or ethnic/linguistic identity, it may not be possible to teach at school, or it may be unrealistic to expect pupils to be able to develop such mastery in a classroom. Valdés refers to Gee (1990) who argues that

> the type of language that is valued in academia is part of an identity kit acquired as a result of legitimate participation in the practices of the dominant. (Valdés 2004, p.120)

However, Gee (2004) sees the situation in terms of advantage and disadvantage, not possibility and impossibility (see p.49). Scarcella suggests that some researchers:

(Street 1985, 1996; McKay and Weinstein-Shr 1993; Valdés 2000; Zamel and Spack 1998), believe that academic English should not be taught to English language learning pupils because academic English is too diverse, and consists of multiple, evolving literacies (Scarcella 2003, p.5). However, no applied linguists are suggesting that this is a dichotomous discussion of the possible versus the impossible. In the quotation at the beginning of this section, Valdés is critiquing the teaching methods of ESL in the U.S.A. context, not questioning the feasibility of academic English pedagogy in general.

Haneda lists reasons why, in language related studies in education, the topic of teaching academic language to EAL pupils matters. Her list includes: that globalization has caused widespread pupil population diversity, including in English-speaking countries; that mastery of academic language is critical to accessing the curriculum content of school subjects; that educational researchers have recommended linguistic instruction for all pupils, not only EAL pupils; and because any school teaching must consider the pupils, the content, the methods and the social context of the particular classroom to be effective (Haneda 2014, p.88).

Given that language patterns are learned rather than innate, Christie argues that all types of development realised in language can be supported at school through teaching ways of meaning, knowing, working and enquiring using appropriate patterns of language (Christie 1985, pp.22-23). Children develop linguistic proficiency along with their sense of identity and individuality by participating in social situations, including at school. The language patterns appropriate to school must be learned for the enactment of a successful school-going identity. Schleppegrell, also from the systemic functionalist perspective, supports this view:

> Recognizing the socially constructed nature of the language of schooling also enables us to see that it can be taught and learned. (Schleppegrell 2004, p.7)

However, while it is generally accepted that academic English can be learned in the classroom, there is some discussion about whether academic English pedagogy is necessary or helpful. Christie reports a view, prevalent in parts of Australia, that systematic tuition to develop literacy interferes with "natural learning", and that teachers should facilitate natural learning by encouraging children to follow their own

intuitions and interests for reading and writing at school, in the same way that they learn oral language. However, this "natural learning theory" fails to acknowledge the considerable amount of guidance children receive when learning oral language, that they gain much more exposure to spoken than written language, and it also disregards the grammatical differences between spoken and written language (Christie 2004, pp.24-25). Academic English mastery develops at post-primary levels:

> "complete control of the written mode is a development of adolescence and of secondary education" (Christie 2004, p.29).

It is an integral part of the incremental and progressively sophisticated learning of each of the subject areas and "[l]earners cannot function in school settings effectively without it" (Scarcella 2003, abstract).

Vollmer argues that it is necessary to deliberately teach and learn subject specific academic language(s):

> it is often wrongly assumed that the respective [for each school subject] competences and skills develop independently, without particular attention being given to them within the subject classroom. (Vollmer 2009, pp.4-5)

Vollmer asserts the importance of identifying the linguistic challenges of school and making the linguistic curriculum explicit, for the benefit of pupils, teachers and teacher educators.

> "It is not obvious to many teachers and students alike, what the specific challenges in language use are, but they are there" (Vollmer 2009, p.4).

Schleppegrell highlights the social justice perspective of this issue, asserting the necessity of academic English development in the classroom for the sake of educational equity:

> In the absence of an explicit focus on language, students from certain social class backgrounds continue to be privileged and others to be disadvantaged in learning, assessment, and promotion, perpetuating the obvious inequalities that exist today. (Schleppegrell 2004, p.3)

Wong Fillmore and Snow also recommend explicit academic English pedagogy in the subject classroom:

> Often, explicit teaching of language structures and uses is the most effective way to help learners. A focus on language is crucial, no matter what subject is being taught. (Wong Fillmore and Snow 2002, p.29)

The need to heighten awareness

> To provide such instructional support [discussions of the language used in texts for rhetorical and aesthetic effect], teachers need to know something about how language figures in academic learning and recognize that all students require instructional support and attention to acquire the forms and structures associated with it. This is especially true for English language learners. (Wong Fillmore and Snow 2002, p.29)

Teachers' awareness of academic English may only reach the level of vocabulary (Wong Fillmore and Fillmore 2012, p.64) and not embrace the grammatical and discourse features of the genres particular to their subject. Christie suggests that teachers and the educational profession at large fail to recognize the genres that are used at school (Christie 1985, p.31). Uccelli *et al* refer to "the widespread metonymical confusion that equates academic vocabulary knowledge with academic language proficiency", while research using the measuring instrument CALS-I (see pp.57-58) reveals language skills other than vocabulary knowledge to be vulnerable to individual variability (Uccelli *et al* 2015, pp.1098-1100). While teachers have definite linguistic expectations of their pupils (Bailey and Butler 2007, p.80), Schleppegrell claims that these expectations are rarely stated (Schleppegrell 2004, p.2) and class time is not allocated to focussing on language. The expectation for language use at school needs to be made explicit (Schleppegrell 2004, p.44; Scarcella 2003, p.8). This may need to start with raising teachers' awareness of these issues:

> teachers of all subjects have to become aware of the challenges posed by the need to support their pupils in mastering the specific language competences that their school disciplines demand. (Beacco *et al* 2015, p.11)

Uccelli *et al* suggest their CALS-I instrument could make the role of pupils' academic language skills visible to teachers and encourage them to include language development in their lessons. Raising teachers' awareness of the genres they expect their pupils to produce, the stages that those genres follow and the grammatical structures they require enables them to make these things explicit in class and give instruction where necessary, facilitating success for all their pupils. Teachers may also not realise that their spoken classroom English, which they perceive as "transparent", may be "opaque to pupils", (Uccelli *et al* 2015, p.1100-1101; Bailey, Burkett and Freeman 2008, p.606). Christie illuminates this issue by emphasizing the

pervasive nature of language, which leads to language being widely taken for granted, including by teachers in the classroom.

> So pervasive is language, and so intimately a part of the total patterns of interaction in which people engage in schools, that it simply slips from the forefront of teachers' attention. (Christie 1985, p.25)

Clearly, there is widespread lack of awareness around the importance of academic language development in the classroom and this has been characterised as the "hidden curriculum" of schooling, a term borrowed from critical pedagogy (Freire 1972; Giroux and Purpel 1983).

The hidden curriculum of schooling

Rose uses the term "hidden curriculum" in "a very specific sense to refer to practices that construct, maintain and evaluate inequalities between learners" (Rose 2005, p.136) and uses the image of an iceberg, with the hidden curriculum of unequal "abilities" being maintained through classroom discourse, as the majority of the iceberg hidden from sight underwater. Rose argues that children in literate middle class families are prepared beforehand for each of the stages in literacy development: they learn to engage with reading during parent-child reading before they start school, they are then ready to learn to read independently in primary school, to learn through reading and to display their learning by writing, which in turn prepares them for secondary school. Rose argues that literacy skills are not explicitly taught at each stage and "what learners are evaluated on are actually skills they have acquired in the preceding stage" (Rose 2005, p.138). The children from literate middle class backgrounds are "affirmed as 'able'", while those learners who have not pre-acquired the skills are "evaluated as 'unable'" (Rose 2005, p.138) and this stratification of learners continues repeatedly in daily classroom interaction as well as in formal assessments so that learners develop identities as successful, average or unsuccessful. Rose does not see this as a conspiracy; most teachers would like all their pupils to be successful, however, it is an established process, which serves to reproduce a stratified social order. Rose claims that the ability to read and independently learn from reading is vital in secondary education and proposes the methodology Learning to Read: Reading to Learn, "to rapidly improve reading and writing for educational access and success" (Rose 2005, p.131). This methodology involves teaching literacy

skills explicitly to redress inequalities so that "successful learner identities can be distributed equally to all students" (Rose 2005, p.142).

Vollmer uses the term "hidden curriculum" to refer to the linguistic and communicative demands of school which are not made explicit enough to learners. He lists various communication requirements of school:

- reading and understanding expository texts, which are often different in structure depending on the disciplinary context
- listening to explanations of complex issues by the teacher
- answering questions orally and in a written mode
- presenting results of investigation and study
- participating in topic-oriented discussions (Vollmer 2009, p.4)

Learners need these language competences to be able to follow subject teaching, communicate about content and thus develop understanding. However, schools may not attempt to meet this need, possibly believing that these skills develop without explicit instruction. Vollmer suggests that schools are responsible for the educational failure of pupils who are expected to learn competences without having been taught them. Beacco *et al* 2015 report

> There is a broad consensus that the traditional approach of schools of expecting young people to come to school with age-adequate proficiency in the language of schooling acquired at home and just needing to be given finishing touches by language as subject is no longer sufficient. (Beacco *et al* 2015, p.23)

Christie focuses on how particular genres are used to convey particular meanings, in spoken as well as written language; if genre is not explicitly addressed in the school classroom "it simply becomes part of the hidden curriculum of schooling" (Christie 1985, p.38).

> It is the capacity to interpret and create such forms or genres that is actually involved when we learn how to mean in language. Those who fail in schools are those who fail to master the genres of schooling . . . Language plays a critically important role in determining who succeeds and who does not succeed in school. (Christie 1985, pp.24-5)

To summarize, the study of academic English, from various perspectives, highlights social justice issues of educational equity (Christie 1985; Corson 1993; Cummins 2000; Gee 2004; Schleppegrell 2004; Valdés 2004; Rose 2005; Vollmer 2009; Cumming 2013; Demie 2013; Uccelli *et al* 2015; Beacco *et al* 2015).

Classroom applications

In her review of the literature on disciplinary literacy teaching, Moje asks

> what would it look like to fuse the moral and intellectual in a way that produces socially just subject-matter instruction that is not only socially just but also produces social justice? (Moje 2007, p.1)

Moje explains subject-matter instruction "that produces social justice" as education not only offering possibilities for all youth to transform themselves through learning, (socially just education), but also offering possibilities for all youth to transform the social and political contexts within which they are learning. Broad principles of practice can guide such pedagogy, but teachers must respond to the particular immediate needs of pupils. Subject-matter specialists from English language arts, mathematics, the social sciences and the natural sciences may have different teaching aims depending on what resources they hope their pupils will access. This reflects the values of the subject-matter specialists, whether they favour knowledge or skills and strategies (Moje 2007, p.6). Moje's term "disciplinary literacy" focuses on one of four perspectives that frame socially just subject-matter pedagogy: "Social justice as access to knowledge via access to ways of producing knowledge" (Moje 2007, p.8). Disciplinary literacy recognises that while pupils need to learn knowledge in each discipline, that "some of the power of knowledge comes from being an active part of its production rather than from merely possessing it" (Moje 2007, p.8). Pupils learn to produce oral and written texts, which are appropriate within the context of their discipline. This perspective highlights how important language is for pupils to access both disciplinary knowledge and habits of mind (Moje 2007, p.9).

Using the conceptual framework of Bahktin, Valdés recommends classrooms that create opportunities for ELL pupils to become "active participants in a social dialogue" through their writing.

> What is often missing entirely from discussions of the teaching of academic discourse to L2 learners in both high school and the upper grades is the notion that writing is about ideas, that presentations are about ideas, and that when one engages in writing and speaking one also engages in a dialogue with others. (Valdés 2004, p.122)

Valdés looks for ways of directing pupils into real communication spheres where they can participate in academic discourse, find their own voices, and use the tools and resources gained through instruction. Thus pupils are not just writing to a pretend audience "so that their teacher can correct their vocabulary and syntax" (Valdés 2004, p.123).

Schleppegrell asserts "All children need opportunities to develop awareness about academic language and to practice engaging in activities in which academic language is used" (Schleppegrell 2012, p.410). Vollmer underlines the importance of explicit linguistic instruction in all subject areas, as well as opportunities for learners to practise their academic language.

> For example they need opportunity for all kinds of self-repair, re-writing exercises and plenty of room for planning, monitoring and editing their utterances, especially their written products. (Vollmer 2009, p.9)

Vollmer argues that for native and non-native speakers alike, these competences do not develop by themselves; academic language development must be supported at school because it is an integral part of subject learning. Different subjects use different ways of thinking, which are developed and communicated using different types of discourse; the language and thought processes are closely linked. Vollmer highlights the significance of spoken classroom language to develop subject-specific ways of thinking and so facilitate subject learning. He argues that each subject teacher has to become language-sensitive in their field of teaching;

> the subject teacher has to facilitate the gradual acquisition of appropriate forms of subject-related discourse in connection with specific topics and procedures. (Vollmer 2009, p.9)

Wong Fillmore and Snow recommend using spoken academic language to teach content and to discuss the language that is appropriate for conveying that content:

> Children must engage in classroom discussions of subject matter that are more sophisticated in form and content. And teachers must know enough about language to discuss it and to support its development in their students. (Wong Fillmore and Snow 2002, p.29)

Gibbons provides an example of developing academic English in a primary school context, stressing the importance of including stages of spoken language use in the classroom. "Talk is how education happens!" (Gibbons 2002, p.38). Spoken stages

give pupils the opportunity to practise using academic English orally, before they are required to produce written text. Academic speaking acts as a bridge to academic writing.

> There is only one way to acquire the language of literacy, and that is through literacy itself. (Wong Fillmore and Fillmore 2012, p.65)

Wong Fillmore and Fillmore recommend their "juicy sentences" approach, which involves classroom discussion focussed explicitly on language (Wong Fillmore and Fillmore 2012, p.71). This is a major component of a long-term project in U.S.A. cities, which yielded considerable success among English learners and non-standard English speakers, so much so that participant teachers decided to adopt the juicy sentence approach in their mainstream classes for all pupils. Every day, 15 to 20 minutes of class time are used for instructional discussion of a single sentence taken from a text the class is working on. Gradually, pupils "internalize an awareness of the relation between specific linguistic patterns and the functions they serve in texts" (Wong Fillmore and Fillmore 2012, p.69).

Classroom discussions that demonstrate teachers' confidence that their pupils can develop the ability to interpret and produce dense academic language reflect the kind of teacher-pupil relationship, recommended by Cummins (pp.43-45), that promotes collaborative relations of power and encourages positive pupil identities, leading to academic success. Cummins sees literacy engagement and identity affirmation as components of a strategy leading to educational equality, which are as important as explicit academic English development (Cummins 2014, p.146).

Reflection

The literature offers general principles, which may be applicable to the Irish context. There is a strong rationale for academic English development in the classroom as a means of achieving educational equity in the area of language. Applied linguists in English speaking contexts (Australia, Canada and the U.S.A.) highlight the need to raise awareness of linguistic issues within education and propose models for classroom application. Different subjects use different genres, with different

grammatical structures and discourse patterns. Pupils need to know the language features they are expected to understand and produce and to know in which contexts they are appropriate. Academic Englishes are learned within their own contexts, the subject classroom, and lead towards engagement in the discipline beyond school. Academic Englishes reflect the ways of thinking of their discipline.

Another principle suggested in the literature is that teaching methods associated with language learning may be appropriate for explicit academic English development in the classroom. The interventions explored in this study employ language-teaching methods in the mainstream subject classroom to develop academic English (of Biology and Religion) on the levels of discourse, the sentence and lexis.

To summarize, an important conclusion from a review of the literature is that children are affected by a lack of awareness of linguistic issues during their education. This may influence children's success at school and beyond, as well as their personal development. Realistic long-term expectations about academic English development need to be made explicit, and acted upon, to achieve educational equity from the perspective of language.

In the context of Ireland, there are many reasons why academic English development should become an integral part of all post-primary lessons. All pupils need to develop academic English. EAL pupils need at least four years to catch up with their native English-speaking peers and reach age-appropriate academic English proficiency. Newcomer pupils are placed in mainstream classes on arrival at school. Language is integral to subject content learning, so it is logical that both language and content be explicitly addressed in school. Linguistic scholarship has much to offer the Irish context, including means to raise awareness of this issue, guiding principles and suggestions for classroom applications. There are also associated implications around school assessment, which are beyond the scope of this study. The EU offers the ideal of plurilingualism (p.15), which may be seen as a further challenge to the Irish education system.

Chapter 4 - Theoretical frameworks

As post-primary level academic English development is the subject of this study, the underlying framework draws on both linguistic and educational theory. Systemic functional linguistics, which was introduced by Halliday, provides the linguistic theoretical framework. Sociocultural perspectives on language and learning, based on the work of Vygotsky, provide the basic theory of learning.

Systemic functional linguistics

Systemic functional linguistics is a comprehensive theory of language, which emphasises the importance of the social context within which language is generated. As the name suggests, the notions of system and function are central. The lexicogrammatical (lexical and grammatical) systems of language offer the speaker or writer choices between multiple discrete options for meaning making; that is, the meaning of one language choice is understood in the context of being a rejection of the other possible choices. Constantly making such lexicogrammatical choices enables speakers and writers to construe meaning on three levels, relating to the three metafunctions of systemic functional analysis: the ideational metafunction, the interpersonal metafunction and the textual metafunction. Systemic functional analysis can be extremely detailed, however this project employs some of the broader aspects of the theory: systemic functional genre theory, the linguistic measure of lexical density and the notion of thematic progression. The decisive feature of systemic functional linguistics for this project is the importance it places on the meaning of language within its social context, in this case the social context of the post-primary classroom. The texts analysed in this study are examination questions, classroom texts chosen for teaching purposes by teachers, and classwork written by pupils (p.124). These texts are examined for features of academic English, such as high lexical density and thematic progression involving grammatical metaphor, with the aim of describing post-primary academic English in this particular context.

The choice of systemic functional linguistics as the linguistic framework for this educational action research project might be criticized on the basis that it is:

> a linguistically sophisticated model originally designed more as a theory of language than as a framework for educational research. An educationally relevant framework would direct less attention to the description of linguistic features per se and more to the skills required in the process of mastering academic language and, thus, potentially to the nature of instruction that would promote those skills. In other words, we argue for the value of practice-embedded approaches to thinking about academic language that would generate more directly useable information. (Snow and Uccelli 2008, p.114)

This study aims to produce useable information to benefit teachers and pupils, and approaches the challenge of academic English development in post-primary classrooms in Ireland from a practice-embedded perspective. However, recognizing that there is no one-size-fits-all formula to address this challenge and bearing in mind the heterogeneity of the pupil population, the theory of language provided by systemic functional linguistics with its emphasis on meaning making within the social context is invaluable as the linguistic framework underpinning this research.

Genre

When many different texts with a similar purpose follow a similar overall pattern, these texts share the same genre. Genre is "the staged, structured way in which people go about achieving goals using language" (Eggins 2004, p.10) within the context of culture. Listeners or readers recognize a genre and that recognition aids their identification of the purpose and their interpretation of the meaning of the text (Eggins 2004, p.55). Christie defines genre as "any purposeful, staged, culturally created activity which finds expression in a language form" (Christie 1985, p.24). "Once upon a time . . . and they all lived happily ever after" and "Dear Sir . . . Yours faithfully" are instantly recognizable stages of well-defined genres in English. The stages of a fairy story become familiar to children through repetition. The fixed form of a business letter is explicitly taught, foregrounding the purpose of the letter and the importance of using the correct overall structure (the stages) and the appropriate lexicogrammatical choices. However, the business letter is an unusually rigid genre; it is easy to describe, which makes it easy to reproduce and teach in an instructional context, such as school. Less formal genres are always changing and evolving with highly varied actual realizations (Schleppegrell 2004, pp.82-83). Such genres are more difficult to define and teach. Martin (1989) distinguished personal, factual and

analytical genres: categorizing personal genres into recounts and narrative, factual genres into procedures and reports, and analytical genres into accounts, explanations and expositions.

Christie highlights the significance of genre for writers: "successful writing at any time always involves mastery of a particular kind of genre" (Christie 1985, p.38). Applying this principle to the school classroom, Christie states that if genre is not explicitly addressed "it simply becomes part of the hidden curriculum of schooling" (Christie 1985, p.38). Schleppegrell also emphasises the importance of learning academic genres or text types for success at school (Schleppegrell 2004, p.83).

> Each subject area of schooling has its own expectations in terms of the genres that students will read and write, and each genre is constructed through grammatical resources that construe the disciplinary meanings (Schleppegrell 2004, p.113)

There are countless different instances of each genre, which makes genres difficult to define, however, texts of the same genre can be said to progress through a series of stages particular to that genre and share a common specific social purpose. For example, expository texts present a thesis using supporting arguments. Following Martin (1989) and Christie (1998 and 2002), Schleppegrell suggests "seven prototypical school-based genres: *Recount, Narrative, Procedure, Report, Account, Explanation,* and *Exposition*" (Schleppegrell 2004, p.84, italics in the original). Research into these different genres has demonstrated the different register features used to realise each of them. For example, in the work of Applebee, Durst, & Newell 1984; Christie 1986; Coffin 1997; Crowhurst 1980 and 1990; Durst 1987; and Martin 1989, "exposition" has been shown to be realised through: naming arguments in noun phrases, using abstractions, using modal verbs of possibility, reasoning with nouns, verbs, and prepositions using subordinate clauses and condensation, marking contrast, classifying, and logical sequencing (Schleppegrell 2004, p.85). Pupils need to experience genres of schooling in their appropriate context to understand their purposes, and then focus on the lexicogrammatical features that construct them within this context, building on the familiarity gained.

One objection, inspiring resistance to genre-based teaching concerns the lack of opportunity for pupils to write creatively if education is dominated by prescribed

genres. However, genre-based pedagogy can be seen as facilitating creativity, as it is necessary to have mastered the system to be able to make creative choices. Genre theory, as integrated into the overall theory of systemic functional linguistics, sees language at all levels, phonology/graphology, lexicogrammar and discourse semantics, as a meaning-making resource within its cultural context.

> Seen as a system, genre is not so much about imposing structure as offering choice – a menu with several courses of social purpose to choose (Martin and Rose 2008, p.258).

The flexible nature of genres also allows for creativity and the potential for the emergence of new genres;

> The key to modelling change is setting genre up in such a way that it dictates familiarity (so we know where we are coming from) at the same time as enabling innovation (so we can see where we are going) (Martin and Rose 2008, p.259).

Another objection argues that genres get mixed together, creating confusing "mixed genres", however Martin and Rose see this term as self-contradictory as when two or more genres can be recognized in a text, it is the text which is mixed, not the genre, demonstrated by the very fact that the different genres are distinguishable (Martin and Rose 2008, p.242).

Resistance to embracing genre may also be associated with hegemonic concerns; that genres are powerful and are used by the elite to maintain the unequal social order. Martin and Rose see the significance of genre awareness as the argument in favour of genre-based pedagogy, which has motivated their work:

> We concentrate on redistributing access to powerful genres because we think this is a significant step in subverting a social order in which middle aged, middle class, anglo-saxon, able-bodied men preside over the accelerating destruction of our planets' material resources and pitiless exploitation of its disempowered people. (Martin and Rose 2008, p.259)

Martin has conducted extensive action research in Australian schools, with the aim of improving literacy education, using the notion of genre as developed within systemic functional linguistics.

> The distinctive features of this model, which made it such an indispensable foundation for genre-based literacy programs, are (i) its focus on grammar as a meaning-making resource and (ii) its focus on text as semantic choice in social context. (Martin 2009, p.11)

Speakers and writers construe meanings (ideational, interpersonal and textual) through their grammatical and lexical choices, and build these meanings up through stages into patterns, genres, which are recognized and utilized repeatedly within a culture to achieve a social purpose. Genres are recurrent configurations of meaning or staged goal-oriented social processes (Martin 2009, p.13). Martin demonstrates how a few small changes, such as introducing modality and evaluative language to a piece of writing, an "anecdote", change its social function and therefore its genre to an "observation". If school pupils are not familiar with the lexicogrammar needed to construct a school-based genre, which they are expected to read and/or write, it must be explicitly taught;

> discussing the relation of lexis, grammar, and discourse structure to genre is inescapable-since the lower level resources have to be brought to consciousness and taught (Martin 2009, p.16).

Martin also comments on how genre awareness provides a natural context for second language development (Martin 2009, p.18).

Teachers need tools to enable them to make explicit the features of academic English that their pupils are required to master. These features are different in different subjects, different in different lessons and may or may not be familiar in differing degrees to some, many or all of the pupils in a classroom. Teachers need to be able to identify and describe academic English features such as the stages of a required genre and the grammatical constructions appropriate to that particular genre. Pupils need to be able to discuss genre, as well as lexis and grammar, in the classroom. If these issues are not made explicit to pupils, it is not reasonable to expect pupils to produce academic genres.

Lexical density

Lexical density is a means of measuring the number of content carrying words used in a text, generally nouns, main verbs, adjectives and adverbs. This can be calculated in different ways. Schleppergrell designates lexical density as the average number of content words per non-embedded clause (Schleppergrell 2004, p.108). Spontaneous spoken English has a lexical density of approximately two content words per clause,

while written academic texts generally have at least double that (Schleppergrell 2004, p.67). In this study Eggins' method of calculating lexical density is used, which produces a percentage:

> The lexical density of a text can be calculated by expressing the number of content carrying words in a text/sentence as a proportion of all the words in the text/sentence. (Eggins 2004, p.97).

The purpose of this is to be able to compare the different types of texts representing academic English in this research context: examination questions, classroom texts and classwork written by the pupil participants (pp.166-168).

Thematic structure

One way that the clause is characterised in systemic functional linguistics, associated with the ideational metafunction concerning message, is by dividing the clause into two parts: the Theme and the rheme. The Theme serves as the point of departure of the message and comes first in the clause in English (it is often the same as the subject noun phrase of the clause). The rheme develops the Theme. This model is useful for analysing academic English (see p.159 and p.163). For example in expository essays, the progression of arguments can be achieved by condensing an argument or the preceding step of the argument, and making it the Theme of the next sentence, so that it can be further developed in the following rheme. Grammatical metaphor, particularly nominalisation, can be used to condense information in the Theme of a clause. Halliday and Mathiessen refer to grammatical metaphor as "incongruent" in that it is not the way people usually express themselves in conversation (Halliday and Mathiessen 2004, p.636). Thematic analysis involves identifying the Themes of each clause in a text to indicate the progression of the message of the text (pp.154-155; pp.158-159; p.161; pp.163-164).

Sociocultural perspectives on language and learning

> The child's intellectual growth is contingent on his mastering the social means of thought, that is, language. (Vygotsky 1986, p.94)

Sociocultural theory is founded on the work of Lev Vygotsky, 1896-1934, whose influential work, written in Russian, was first translated into English in the 1960s. In the context of psychology, Vygotsky proposes word meaning, "the internal aspect of the word" (Vygotsky 1986, p.5), as the unit of analysis for studying the relationship between thought and language. Meaning is an essential feature of both thought and word. The relationship between thought and language is not only that thought is expressed in words, but that thought comes into existence through words. Thoughts tend to make connections and establish relations between things (Vygotsky 1986, p.218). Learning involves making such connections and transforming previous understanding and ability through the mediation of words, as well as other psychological tools, such as numbers, (and also artefacts, such as maps and books). These tools are constructions of society, which children learn to use in social situations.

Vygotsky states that using language involves generalizing about the world, as the meaning of each word is a generalization; words do not refer to only one object, but to a group or class of objects. "Generalization is a verbal act of thought" (Vygotsky 1986, p.6), therefore using language reflects reality in a qualitatively different way from sensing reality or perceiving reality. Vygotsky demonstrated how language, as a psychological tool, "mediates, that is, regulates or organizes, our thinking" (Swain and Lapkin 2013, p.104) as we learn to use language to accomplish high level thinking internally for ourselves, that previously, in early childhood, others have used with us to regulate our behaviour. Thus, the functions language serves in society become psychological in the individual through the internalization of language, the social means of thought.

Children develop everyday "spontaneous" concepts within their social setting, and "scientific" concepts consciously through instruction. Instruction can facilitate the connection, (or growth into each other), of scientific concepts with everyday

spontaneous concepts, if the spontaneous concepts are sufficiently developed (Vygotsky 1986, pp.194-195) resulting in actual development. Vygotsky used the metaphor of the zone of proximal development (ZPD) to represent the learning potential of an individual. Assessing what a child can do unaided "is far from the whole story" (Vygotsky 1986, p.187) of school learning. Pupils do not learn anything from classroom activities that only require them to use skills and/or knowledge they have already mastered (Vygotsky 1986, p.189). With assistance, a child may be able to solve problems considered to be appropriate for older children. Learners need to be working in their ZPD, which is their potential for learning as a result of receiving help, beyond what they can achieve on their own. "What the child can do in cooperation today he can do alone tomorrow" (Vygotsky 1986, p.188). Leading a learner to do what they could not do before is achieved through collaborative social activity, for example solving a problem with the help of an expert, such as the teacher.

Research building on Vygotsky's foundations has indicated that the "help" can also be provided through collaboration with peers, using language together to solve a problem, with all learners achieving more than they could if they were working alone, (Donato 1994; Swain, Brooks and Tocalli-Beller 2002). The "help" may also take the form of educational artefacts, such as textbooks, electronically accessed information or videos, or a combination of all of these. Swain and Lapkin (2013, p.119) argue, following Swain, Kinnear and Steinman (2011), that the ZPD is better viewed as an activity than a space. With this understanding the same group activity might represent a ZPD for some of the participants, but not for others. Clearly, learning activities designed for classes of 30 children should facilitate each child accessing their ZPD.

Whole-class discussion allows "the teacher to monitor the understanding and participation of all learners simultaneously" and enables pupils to hear all the voices represented in the class, but may favour the more socially confident pupils and "perpetuate the inequalities of class, race, and gender that exist in the larger society" (Brookfield and Preskill 2005, pp.101-2). Dillon provides principles of discussion for classrooms. These include the logical conditions necessary, for example that more than one point of view is expressed on the subject. He also includes principles of

conduct, for example the principle of freedom that there are no restraints to speak freely and offer a true opinion. Dillon highlights intellectual qualities, for example respect for the opinions of others and reflectiveness, openness dimensions, for example the subject matter, participants, time and outcomes should all be open, and phenomenological elements concerning the consciousness of discussion participants, that they are free to address any other participant in their common search for meaning. The interaction of discussion "is not just an intellectual exchange of minds but a social, moral, emotional, personal interrelation" (Dillon 1994, p.12). Clearly, achieving a principled classroom discussion in these terms involves careful development of skills among pupils over time; these are important skills, which promote democracy.

> Discussion and democracy are inseparable because both have the same root purpose – to nurture and promote human growth . . . by giving the floor to as many different participants as possible, a collective wisdom emerges that would have been impossible for any of the participants to achieve on their own. (Brookfield and Preskill 2005, pp.3-4)

Coined by Swain (2006), the theoretical term "languaging" follows from Vygotsky's perspective on thought and language.

> Languaging is the use of language to mediate cognition and affect . . . language serves to construct the very idea that one is hoping to convey. It is a means by which one comes to know what one does not know. (Swain and Lapkin 2013, p.105)

Swain and Lapkin give examples of languaging taking the form of private speech, which is speech for the self, as well as examples of languaging between learners in the form of collaborative dialogue. Much of Swain's work focuses on language education. With Brooks and Tocalli-Beller, Swain reviewed research into peer-peer dialogue as a means of second language learning, exploring whether peers can support each other's learning within each other's ZPD by

> for example, questioning, proposing possible solutions, disagreeing, repeating, and managing activities and behaviors (social and cognitive) (Swain, Brooks and Tocalli-Beller 2002, p.173)

and concluded that collaborative dialogue between peers mediates second language learning. However, this also applies in the context of mainstream content teaching. Swain and Lapkin cite 20 years of empirical evidence supporting the positive impact of languaging on learning (Swain and Lapkin 2013, p.108).

Languaging is rarely found in classrooms following the transmission model of education, as pupils' opportunities to speak tend to be controlled by the teacher and limited to high-stress and/or knowledge-testing moments when the rest of the class is listening. Corden identifies the I-R-E exchange as the distinctive discourse pattern of the classroom, where the teacher initiates (I) the discourse with a question, the pupil responds (R) with an answer and the teacher evaluates (E) that response as she provides feedback (Corden 2001, p.372). Corden's research explored the possibility for teachers of breaking out of this role of "didactic expert", particularly during group work activities, towards a collaborative role to encourage discussion in groups.

Wells asserts that "social constructivism", the application of Vygotskian theory to education, "calls for an approach to learning and teaching that is both exploratory and collaborative" (Wells 2000, p.8). Vygotsky saw cognition and affect as inseparable. He considered the separation of the intellect from the affective, volitional side of consciousness a mistake of traditional psychology (Wertsch 1985, p.189; Swain and Lapkin 2013, p.114).   Swain and Lapkin observe that "emotion and cognition together drive learning" (Swain and Lapkin 2013, p.114). Thus pupils' identities are an important factor in learning:

> learning is not simply the acquisition of isolated skills or items of information, but involves the whole person and contributes to the formation of individual identity. (Wells 2000, p.8)

Education involving peer interaction, valuing the contribution each individual can make, not only promotes the distribution of positive learner identities to all pupils, but also takes advantage of diversity in the classroom as a positive resource. A heterogeneous class is more likely to offer opportunities for pupils to learn from each other than a homogenous group.

For the purpose of this study, I interpret the metaphor of the ZPD in terms of the space in which (or the activity during which) learners cross the boundary of what they already know, or understand, or can do, in order to make progress in their learning. This may be achieved through direct help from the teacher, class discussion, negotiation of meaning with peers, listening to or reading a source of knowledge or instruction, or through reflection leading to making connections between ideas in

response to a stimulus. However it is achieved, formal school learning always involves language. Instruction about language, for example the "scientific concept" of genre, and explicit knowledge of the stages and appropriate lexis and grammar of genres used in each subject supports pupils in crossing their boundaries of learning; it makes explicit how to use language to learn. In this study I see knowledge about language or linguistic awareness at the levels of genre and grammar as well as the level of word meaning, as another psychological tool, a meta-tool, which can help pupils learn (see p.236).

School is a social situation, with typically 30 pupils in a classroom. Learning activities which take advantage of the opportunity the classroom affords to negotiate meaning with others, particularly in group work and dyads, facilitate each pupil reaching the boundary of their ZPD. From there they can identify what they do not know or cannot do and act to progress in their learning, for example by asking a question. When pupils understand how they can use language to learn in any one situation, this will support their learning. When pupils expect to know or else be taught how they should use language to perform a content learning activity, they will know that they can ask for clarification about appropriate language use. If pupils do not have this expectation they will be unlikely to ask linguistic questions. Language must be discussed in the classroom for pupils to be aware of the linguistic forms that they are required to produce. For example, it is appropriate to instruct pupils on the stages of problem solving group discussion, until they master this genre. Activities which require pupils to produce language provide opportunities for learning, compelling pupils to commit their thoughts to outward expression and thus create thoughts. Following Gibbons (pp.77-78) oral expression in the classroom can act as a bridge to academic writing. The design of intervention 1 (pp.109-110; pp.291-292) in this study follows this theoretical logic: pupils read a text, discuss it in groups, participate in a class discussion and then write on the subject of the text.

To summarize, this study uses the measure lexical density and the notion of thematic progression from systemic functional linguistics to compare different texts representing academic English in this particular post-primary context. Genre theory is a key constituent of academic English development. Learning about language:

lexis, grammar and genre, as well as learning subject content through language can facilitate pupils accessing their ZPD, Vygotsky's metaphor for learning potential.

Chapter 5 – Ethical considerations

> it does behove researchers to reflect on the methods we use to study children.
> (James, Jenks and Prout 1998, p.188)

Ethical considerations are a constant feature of this research project, particularly because most of the participants are children. From the planning involved in the initial design, reflection involved in gaining ethical approval, care of participants during data collection activities, safeguarding of data, and sensitive analysis aiming to give voice to multiple world views, to the proper destruction of data at the end of the whole process, the fundamental underlying motivation of this study is to do good and not to do any harm. This chapter begins with some historical background concerning ways children have been viewed in research, and positions this project within that context. The chapter then focuses on ethical concerns associated with the research site of the school, giving examples from research carried out in other school contexts. The purpose of this is to reflect on the positioning of this post-primary level school-based research project within the wider context of research with children and to explain methodological choices made in the planning of this project from an ethical perspective. The final section acts as an introduction to appendix 1 (pp.264-286) which provides an account of how the research principles of participant autonomy, consent, privacy and beneficence are applied in this project, in a detailed report on the data collection process.

The new social studies of childhood

The new social studies of childhood is set against the background of European cultures, from before the advent of Sociology, with their prevailing conceptions of childhood. Such conceptions are characterised as "the evil child", "the innocent child", "the immanent child", "the naturally developing child" and "the unconscious child" and are still influential today (James *et al* 1998, pp.9-21). In the eighteenth century, Rousseau presented the child as a person, with needs, desires and rights through his treatise on education, *Émile*. Robertson, quoted by James *et al* writes:

> For the first time in history, he [Rousseau] made a large group of people believe
> that childhood was worth the attention of intelligent adults, encouraging an

interest in the process of growing up rather than just the product. (Robertson 1974, p.407 cited in James *et al* 1998, p.14)

Nearly two centuries later, Harold Dent, a headmaster in the UK, expressed his belief that young people had

a personal interest in their upbringing, something to contribute to its problems, and a point of view that we (should) treat with greater deference. (Dent 1939, p.390, cited in Rudduck and Fielding 2006, p.221)

"Socialization" developed as a dominant perspective for understanding child development and childhood within the discipline of Sociology. The process of socialization comprises learning to conform to the social norms of a culture, consequently successfully preserving that culture for the future. From this perspective children are seen as incompetent and incomplete until they reach maturity in adulthood. Research conducted on children from this perspective makes no attempt to understand their worldview. In contrast, this study aims to give school pupils an outlet to express their worldviews, particularly pertaining to classroom activities and academic language, with the purpose of informing recommendations for improving post-primary education.

Deatrick and Faux elucidate these distinctive approaches, identifying "two competing perspectives of researchers studying children and adolescents" (Deatrick and Faux 1991, p.203). One view holds that developmental immaturity, both cognitive and linguistic, causes children to be unable to describe and understand their world and life experiences. This developmental paradigm sees children as incompetent, and as the objects of research (Munford and Sanders 2004). The other perspective views children as competent interpreters of their world. Darbyshire, MacDougall and Schiller describe the paradox of the "missing child" in research endeavours "ignoring the views of children as active agents and "key informants" in matters pertaining to their health and wellbeing" (Darbyshire *et al* 2005, p.419). As well as being paradoxical, or illogical, to overlook or disregard the opinions of children in research intended to benefit children, it may also be unethical.

In the Republic of Ireland the government is committed to children-centred research, in terms of both facilitating the expression of children's views and acknowledging the

contribution their opinions make to debates where they are stakeholders. Goal 1 of the National Children's Strategy reads,

> [c]hildren will have a voice in matters which affect them and their views will be given due weight in accordance with their age and maturity. (Bunreacht nah-Éireann Inter-Departmental Group 2000, p.30)

Fargas-Malet, McSherry, Larkin and Robinson, working from Queen's University Belfast, in Northern Ireland, UK, write: "children are now viewed as social actors who are 'experts' on their own lives" (Fargas-Malet *et al* 2010, p.175). White, Bushin, Carpena-Méndez and Ní Laoire, based at University College Cork, see the debate concerning the perspectives of research "on", "with" and/or "by" children beginning to have an impact on children-focused research in Ireland (White *et al* 2010, p.143). In this study, an example of research with children, the pupil participants are viewed as experts at being post-primary school children and their views are highly valued as such. This is made explicit to pupils during the introduction to the study and at the beginning of focus groups, as well as at opportune moments throughout the project.

Darbyshire *et al* list cultural, social, psychological and political barriers, which discourage researchers from taking children seriously. In particular, they highlight

> the challenges involved in moving from the 'adultist' orientation that produces research 'on' children, to more participatory and child-sensitive research 'with' children. (Darbyshire *et al* 2005, p.430)

The adult researchers involved with the Consulting Pupils on the Assessment of their Learning (CPAL) project in Northern Ireland were "keen to avoid a purely 'adultist' perspective" (Leitch, Gardner, Mitchell, Lundy, Odena, Galanouli and Clough 2007, p.469). They consulted 11-14 year old pupils directly about various aspects of their classroom experiences of assessment for learning, and engaged them as co-researchers in multiple stages of their project: as research advisers, as data gatherers and as co-interpreters of data, in order to uphold the principle of pupil participation and children's rights (Leitch *et al* 2007, p.462).

In this project, at the data analysis stage, in order to defer as much as possible the influence of the adultist perspective inherent in discussions between the teachers and the researcher, data generated by the pupil participants underwent initial analysis first,

so that codes and categories with a pupil perspective dominated the beginning of the data analysis process, characterizing a bottom-up approach. The collective voice and individual voices of the pupils are of fundamental importance to this study, not least because of their multi-faceted nature, which reflect the diversity of the pupil population. Findings include snapshots of pupils who express notable points of view that diverge from the norm (see pp.191-196). This strategy aims to retain a sense of the diversity and heterogeneity of the pupil population to balance with the findings from the thematic analysis of all the data. I am satisfied that this study gives legitimate voice to the pupil participants, in accordance with Goal 1 of the National Children's Strategy.

The new social studies of childhood recognizes the value of research "with" and "by" children, as opposed to "on" children (Fargas-Malet *et al* 2010; Barker and Weller 2003). Leitch *et al* elucidate Fielding and Bragg's notion of "students as researchers" (Fielding and Bragg 2003) by explaining "participatory inquiries" as research involving pupils being "engaged as both informants and as researchers themselves, with teachers supporting and facilitating the process" (Leitch *et al* 2007, p.460). Leitch *et al* express concern about how genuine this engagement really is, but conclude that it is "entirely possible to engage with students as co-researchers on a basis that is not tokenistic or manipulative" and "that the benefits of such engagement outweigh the problems" (Leitch *et al* 2007, p.476). However, research "on" children has tended to be favoured by commissioners, sponsors and/or government policy-makers. These influential parties may consider research conducted by children as lacking in validity, reliability and rigour due to "the influence of multiple variables such as the children's ages, literacy, cognitive abilities and technical skills" (Coad and Evans 2008, p.44). Children are key stakeholders in education and yet many studies report the continuing influence of traditional power relations in schools, which prevent school pupils' voices from genuinely being heard (Coad and Evans 2008; Fielding 2001). Rudduck and Demetriou write "[S] chool improvement is about enhancing engagement through achieving a better fit between young people and the school as an institution" (Rudduck and Demetriou 2003, p.275) and they recommend taking the agenda for change from pupils, as the key stakeholders. Often, children in research are seen as part of a larger unit such as their family, school or household (Darbyshire *et al* 2005, p.419) where the dominant voices of adults are

more readily heard and/or listened to by researchers. Researchers themselves are included in the "adults in general" who

> speak too readily and too presumptuously on behalf of young people whose perspective they often misunderstand and, in many contexts, frequently disregard. (Fielding 2001, p.123)

Fielding proposes research "by" children as the optimum type of school improvement research (Fielding 2001, p.124). Much of the literature addressing such questions as the optimum degree of involvement of children in research processes, relate to studies with school improvement as their main aim. This project is different in that it is primarily an Applied Linguistics study focusing on ways of developing academic English in the classroom, and so the main focus of this research is probably less accessible to pupils than more immediately relevant issues, for example who teaches them sex education (Fielding 2001). Because of this lack of immediacy, and the relatively abstract nature of the construct academic English (see chapter 3), research "with" children is the most appropriate approach for this study.

School-based research

The location within which research with children takes place is highly significant, affecting both the means of communication associated with the site of research and the power relations that may be at play there (White *et al* 2010; Barker and Weller 2003). Fargas-Malet *et al* (2010) identify various difficulties associated with conducting research within the school setting. There may be logistical problems concerning timetabling and room availability. More importantly children might feel obliged to take part when they would prefer not to, thus the research compromises their personal autonomy, which is ethically unacceptable. A consequence may also be that children whose involvement in a study is coerced, in however subtle a manner, may participate at a minimal level, thereby invalidating the research findings.

The initial presentation of a research project in a school setting is particularly prone to this ethical pitfall of coercing involvement:

> Using the classroom context as a basis for research virtually guarantees a child's involvement in initial 'information' sessions about the project's aims,

> expectations and outline, because in a formal educational setting a child is
> expected and required to conform to 'normal' classroom etiquette. (White *et al*
> 2010, p.145)

My initial information session with pupils might be said to be guilty of this ethically suspect practice. It was a presentation to the whole transition year cohort, during a regular school period, in the form of a visiting speaker talking about their occupation, in my case research, to give pupils an insight into a career in academia. This, at least, was a positive contribution to the transition year programme. However, my main intention was clearly and explicitly to inform the pupils about my research project and invite them to consent to participate in it, during a school period for which they were required to be present. In hindsight, the two pupils P4 and P36 who did not actually contribute any comments to the study, may not have wanted to be involved, but may have consented to participate because the research setting was their school. In this instance, I believe no harm was done, but in principle this is ethically unacceptable and should be guarded against.

Fargas-Malet *et al* suggest that pupils may interpret participation as "school work", perceive the researcher as performing a teacher's role and feel pressured to give answers that will please the researcher. I aim to counter this tendency by guaranteeing anonymity and the privacy of the research notebooks, inviting constructive criticism and alternative ideas, and attempting to ensure that participation is voluntary at all stages of the project. Such conditions facilitate children being able to give their honest opinions without feeling any kind of anxiety because of seeming rude or fearing retaliation (Rudduck and Fielding 2006, p.226). I also repeatedly stress that the reason I ask questions is because I do not have the answers, thus dissipating the influence of power relations pupils may feel, if they are associating me with the authoritative role of teacher.

Barker and Weller employed a wide range of children-centred research methods, asking their participants to write diaries, take photographs and/or draw pictures which they then had an opportunity to explain during in-depth interviews, and complete a child-centred form of questionnaire. Barker and Weller suggest that research methods that involve children writing, such as diaries and self-completed questionnaires, may be more successful with older children, not because older

children are necessarily more competent at writing, but because children in secondary level education see writing as "a more legitimate and everyday form of communication" (Barker and Weller 2003, p.46). Conducted within a school context, then, research methods that approximate to activities children associate with school may be more successful.

Methods and tools used in research with children include: video-recording by the pupils (Leitch *et al* 2007), photography (White *et al* 2010; Barker and Weller 2003), drawings (Leitch *et al* 2007; White *et al* 2010), participatory techniques and the use of stimulus material in interviews and focus groups (Leitch *et al* 2007), diaries (Barker and Weller 2003) and other life narrative techniques, observation and various forms of questionnaires (Fargas-Malet *et al* 2010), children-oriented and participatory research methods (such as, for example, participant observation, play-and-talk, photovoice and artwork) (White *et al* 2010, p.143). Clearly, there is a wide range of established methods from which to choose.

> Children can be skilled communicators in a host of different ways. If researchers use methods that are oriented around these skills then children can engage more productively with research. (White *et al* 2010, p.144)

So, it is important to consider which methods are most appropriate for the potential participants within their particular research setting. Multiple methods can be chosen, as it is desirable to combine methods when researching with children, for example visual methods with talking or writing (White *et al* 2010, p.155). Cyr, commenting on focus groups as a method of data collection in general, argues that focus groups are best exploited in conjunction with other methods (Cyr 2016, p.8).

Fargas-Malet *et al* suggest another reason for combining methods, in the context of discussing activities used in interviews and focus groups with young children, "Using a mixture of materials and techniques provides children with time to think about what they would like to communicate" (Fargas-Malet *et al* 2010, p.180). This aspect of the pupils wanting to communicate their opinions is important in this study, as well as the aspect of participants having time to formulate their ideas. There is a tension between the intended all-embracing inclusivity of the project design and the freedom for pupils to opt out at each stage of data collection, for example it being acceptable for a pupil to not want to write in their research notebook. This tension results in the self-

selection of pupil participants who contribute because they want to say something about the issues raised by the classroom interventions. Every transition year pupil at this school during the research period is invited to comment and afforded time and multiple means to do so, but no one is coerced at any stage of data collection.

Methods chosen to collect data from pupil participants

I chose to collect data from the pupil participants in a combination of three different forms:

1. comments written in their pupil research notebooks
2. comments spoken in pupil focus discussion groups
3. written classwork.

Research notebooks and focus discussion groups are data collection instruments appropriate to the research "with" children approach. Collecting written classwork for linguistic analysis aligns with research "on" children, although it also facilitates triangulation at the individual pupil level. The main purpose of having examples of the pupils' written English was for linguistic analysis and comparison with post-primary level written academic English from other sources. This also revealed the range of characteristics of academic English produced by the participant pupils. I video-recorded the lessons implementing intervention 2 (involving mime) and used an edited version of the recording for video-stimulated recall in focus discussion groups. The video-recordings were not used for any other purpose (see pp.270-272). I chose to give pupil participants opportunities to express their opinions both in writing and orally, in order to accommodate different character types and preferences, to support inclusivity. Some pupils may be more comfortable with writing, especially in the context of a series of private, relatively informal, handwritten one-to-one communications between themselves and me, the researcher. Other pupils may not find it easy to write, or may not feel disposed to write during five minutes at the end of a lesson, but might be comfortable with expressing their opinions in the context of a small focus discussion group with their peers. They may also find that their opinions develop to a stage at which they are willing to express them through the interaction of peer discussion. My intention was to make the project as inclusive as

possible, thus eliciting as many different opinions, attitudes and preferences about classroom activities and academic language as possible.

Principles of ethical research

> The Principle of Respect for the Individual extends as much to Social Science research as it does to Clinical Research. This Principle includes, *inter alia*, the requirements for *participant autonomy, properly informed consent obtained in writing, privacy, and beneficence or at least non-maleficence.* (University Research Ethics Board, University College Cork 2007, p.9, italics in the original)

University College Cork provides carefully considered ethical guidance for researchers. Proposed projects involving human participants must be submitted to an ethics committee for approval. Appendix 1 (pp.264-286) provides a detailed account of each stage of the processes and actions performed while collecting data with participants in the research site school, drawing on the literature about research with children to elucidate research design choices. This account is organized under the headings: participant autonomy, consent, privacy and beneficence, derived from the above quotation about the Principle of Respect for the Individual.

Chapter 6 – Research methodology

Research questions

1. How can academic language development be integrated into mainstream curriculum lessons to the benefit of all pupils in a multilingual post-primary context?
2. What are pupils' and teachers' attitudes towards classroom interventions designed to integrate academic language development into lessons?

These research questions embody in interrogative form the overall goal of this project: to explore academic English development in post-primary subjects. For me, this goal represents crossing the border between my area of expertise, private language school English teaching, and the post-primary context, which in many ways represents a more challenging teaching and learning environment (see pp.11-13). I move from being an insider to being an outsider in the field of practice. The reason for this somewhat uncomfortable repositioning of myself lies in my belief that teaching techniques usually associated with language teaching, such as the classroom interventions explored in this project, may contribute to redressing language-based educational inequity and address the language dimension of subject learning. I also believe that when school attendance is compulsory, society has a duty to provide engaging, enjoyable classroom activities, which foster learning and support pupils' social and personal development. Exploring the activities which constitute the interventions in this project, with pupils and teachers, is intended to work towards developing such activities.

To answer question 2, I collected data arising from three exploratory classroom interventions: learning activities with an explicitly linguistic perspective, suggested as possible ways of integrating academic English development into lessons. The data collection process invited pupils and teachers to react to the implementation of the interventions in research lessons; a thick description of participants' attitudes towards these interventions provides a direct answer to question 2 (see pp.168-196). The participants' reflections on the pedagogical value of the interventions: rejecting some

features, accepting others and suggesting adaptations, contribute to the development of a more informed answer to research question 1, which is addressed in the final reflection and conclusion chapters.

This research methodology chapter looks back at the previous chapters 2 to 5 and forwards to the following chapters 7 to 9. The earlier chapters provide the cultural and theoretical landscapes within which the study is set: the multilingual post-primary "pluricontext" of chapter 2; post-primary level academic English explored as a theoretical construct in the review of applied linguistics literature in chapter 3; theory of language and learning in chapter 4; and ethical considerations pertinent to this project in chapter 5. All of this provides the background for the exploration of answers to this study's research questions. This chapter describes how this exploration was undertaken, providing a detailed description of the study's interventions, and explains why classroom-based action research was chosen as the methodological framework for this project. The final section overviews the data analysis methods employed, which provide the findings presented in chapter 7 and discussed in chapter 8, leading to the study's conclusions and recommended actions. The term "research lesson" is used to refer to lessons during which the normal teacher implements an intervention as part of the research project, with the researcher present.

Chronological progression of research activities

Gaining access to the field of study

June 2010 – February 2011
- I underwent Garda/police vetting.

August 2011
- University College Cork Social Research Ethics Committee approved the project.

June – October 2011

- I approached post-primary principals in search of willing participant schools and was granted permission to enter one school in September.

Introducing the project to the participants - September 28th – October 18th 2011

September 2011

- 30th I gave a five-minute presentation at a transition year staff meeting to introduce the project and invite teachers to participate.

October

- 4th transition year coordinator passed on the names of two teachers willing to be involved: a Biology teacher and an English teacher.
- 10th meeting with the Biology teacher, who taught both the transition year classes. The Biology teacher signed a teacher consent form.
- 18th I gave a one lesson length presentation to introduce the pupils (both transition year classes together) to the project:
    - research as a career option.
    - a quiz based around the research letter to pupils and parents and the consent form.
    - a short dramatic sketch, written by me and performed by two volunteer pupils, with the message to return the consent forms.

Gaining pupil and parent/guardian consent - October 18th – December 1st 2011

October

- 21st collected 14 out of a potential 60 signed consent forms.

November

- 15th collected 9 more consent forms.
- 16th collected 6 more consent forms.
- 17th collected 6 more consent forms.
- 18th collected 2 more consent forms.
- 24th collected 2 more consent forms (total 39 out of a potential 60).
    - The transition year coordinator provided transition year class lists

- o I handwrote notes to each pupil who had not returned a consent form, providing a new copy of the information letter and consent form and my business card, requesting they return the consent form the next day.
- 28th collected 14 more consent forms.
- 29th meeting with a Religion teacher, who only teaches one of the transition year classes (green class). The Religion teacher signed a teacher consent form.

December

- 1st collected the last of the consent forms. 57 pupils and their parents or guardians gave full consent. Two pupils consented to participate in the project, but withheld some permissions: one did not want written work copied or analysed and one did not want to be video-recorded or for focus group comments to be quoted. One pupil did not want to participate in the project.

Observation of regular classes - December 5th – 9th 2011

December

- 5th observation of green class Biology lesson.
- 9th observation of orange class Biology lesson.

Intervention 1 - December 14th 2011 – February 8th 2012

- 14th research lesson, intervention 1, implemented by the Religion teacher with green class (24 pupils).
- 14th audio recorded conversation with the Religion teacher.

January 2012

- 19th research lesson 1 of intervention 1, implemented by the Biology teacher with green class (29 pupils).
- 20th research lesson 1 of intervention 1, implemented by the Biology teacher with orange class (19 pupils present from the beginning, 8 more entered 10 minutes into the class).

- 20th audio recorded conversation with the Biology teacher.
- 23rd research lesson 2 of intervention 1, implemented by the Biology teacher with green class (26 pupils present (25 research participants)).
- 26th research lesson 2 of intervention 1, implemented by the Biology teacher with orange class (28 pupils present from the beginning, one left the lesson feeling ill).

February

- 8th audio recorded conversation with both teachers.

Intervention 2 - February 21st – April 27th 2012

- 21st informal meeting with both teachers together.

March

- 6th informal meeting with both teachers together.
- 13th informal meeting with the Religion teacher.
- 14th research lesson, intervention 2, implemented by the Religion teacher and video-recorded with green class (9 pupils present (8 research participants)).
- 20th research lesson, intervention 2, implemented by the Biology teacher and video-recorded with orange class.
- 20th focus group with 3 pupils from green class.
- 22nd focus group with 2 pupils from green class.
- 26th focus group with 5 pupils from orange class.
- 26th audio recorded conversation with the Religion teacher.
- 27th focus group with 4 pupils from orange class.
- 29th focus group with 6 pupils from orange class.
- 30th focus group with 4 pupils from orange class.

April

- 20th audio recorded conversation with the Biology teacher.
- 27th audio recorded conversation with both teachers together.

End-of-study focus groups - May 10th – 15th 2012

May

- 10th focus group with 3 international pupils.
- 14th focus group with 4 pupils from green class.
- 15th focus group with 1 pupil from orange class.

The interventions

Central to the methodology of this study are the three interventions which constitute suggested starting points for discussion towards an answer to the first research question: How can academic language development be integrated into mainstream curriculum lessons to the benefit of all pupils in a multilingual post-primary context? The interventions do not represent an answer; they provide a focus for discussion and reflection. I provided the participant teachers with guidelines for implementing each intervention, which they were free to adapt to their own teaching styles and to suit their classes. The original versions of each set of guidelines, are given in appendices 3, 5 and 7 (pp.291-292; p.296; pp.298-299). The original guidelines were entitled:

Intervention 1 - Pupils read about and then discuss a challenging topic

Intervention 2 - Teacher Acts, Class Speaks (TACS)

Intervention 3 - Explicit focus on language – problem solving discussion

Planning intervention implementation in research lessons

I provided teachers with guidelines for each intervention → Teachers planned research lessons incorporating the guidelines → Teachers implemented interventions in research lessons
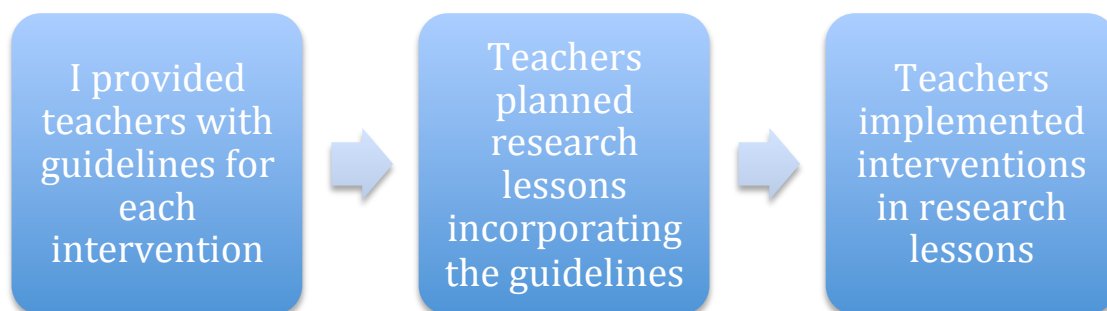
I was present for research lessons during which the teachers implemented the interventions. Following the research lessons, I collected data in various forms from the teachers and pupils, as they reflected upon the interventions and issues arising from their implementation.

Data collection following from intervention implementation

implementation of intervention	source of data	data collection method
research lesson	data from pupils	pupil research notebooks
		focus discussion groups
	data from teachers	recorded conversations
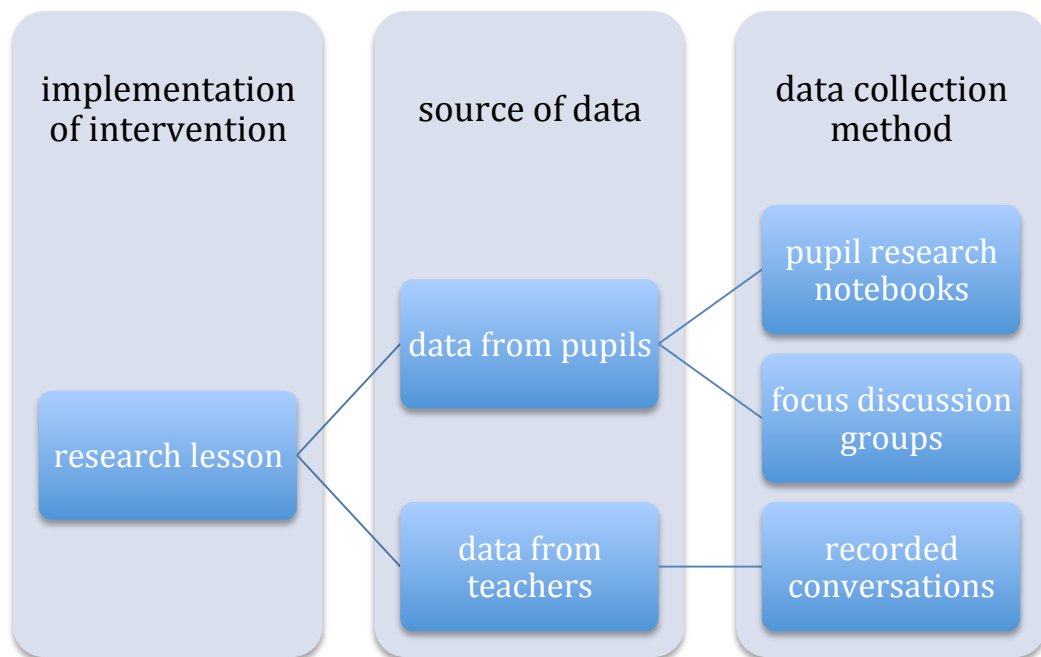
I prepared the guidelines for each intervention, having reflected upon my own English language teaching practice, the multilingual post-primary classroom currently typical in Ireland (see chapter 2), theoretical perspectives (see chapters 3 and 4) and ethical considerations (see chapter 5). Interventions 1 and 2 were implemented in research lessons during the project. Intervention 3 was discussed, but not implemented for logistic reasons. The teachers and I discussed the guidelines and adaptations during audio-recorded conversations. Pupils reacted to the research lessons in their research notebooks and during focus discussion groups. I incorporated the participants' suggestions into revised versions of the guidelines for interventions 1 and 2 (see appendix 4 (pp.293-295) and appendix 6, (p.297)). The teachers and I discussed these revised guidelines during conversations 3 and 6.

Action research cycles around developing intervention guidelines within this study
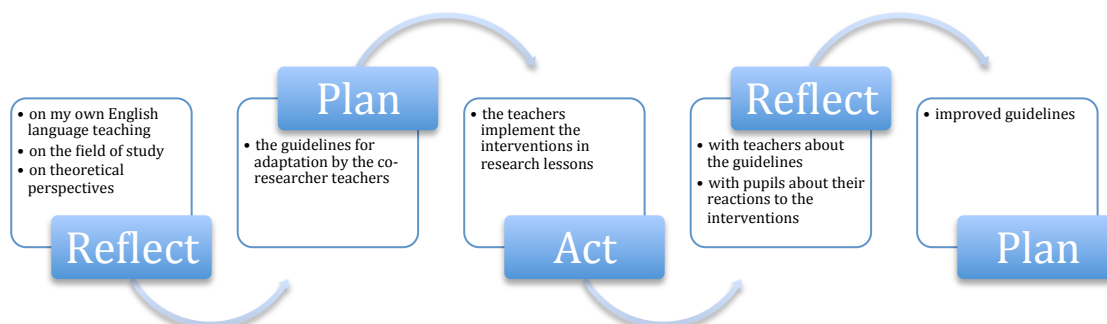
Each intervention was originally designed to support development primarily on a different level of language: the level of discourse to focus on genre, the level of the sentence to focus on grammar and the level of the word or phrase to focus on lexis. Intervention 1 involves pupils reading about and then discussing topics their teachers expect them to find challenging; this affords them the opportunity to meet, use and discuss academic English in an appropriate context in preparation for a written assignment and works on the level of discourse, with sizeable excerpts from texts. EAL pupils may also read mother-tongue texts. In intervention 2, the teacher uses mime and visual aids to elicit a full sentence of key academic language from the pupils. The teacher does not speak at all during this activity, but relies on the pupils to articulate the target language. Intervention 3 provides an opportunity to clarify the meaning of challenging academic terminology through engaging in a collaborative problem-solving activity, through dyad and small group discussion with peers, followed by an open feedback session led by the teacher.

In each of the interventions explored in this study, pupils gain the opportunity to learn from each other, thus exploiting diversity as a valuable resource in collaborative learning. The suggested activities facilitate the development of classroom discourse patterns, which differ in some way from the I-R-E pattern (see p.89). The teacher is no longer asking a question to assess pupils' knowledge or memory, rather she is encouraging the pupils to engage with real questions for themselves. In intervention

1, pupils may be asking themselves and each other: What does this text mean? What does this word/phrase mean within this text? What patterns can I see in this text? In intervention 2: What is the word she wants us to say? What words do I know that might fit the pattern of this sentence? What did my classmate suggest? In intervention 3: How shall I tackle this problem? What is different about how I tackle this problem and how my classmates tackle it? The interventions are not intended to be solutions in themselves, but rather they are example activities for integrating academic language development into mainstream classes, involving techniques and perspectives often associated with language teaching. The rationale behind the design of each intervention is given below, to explain the choices made in their design.

Intervention 1 – Pupils read about and then discuss a challenging topic

In its original form, intervention 1 is a teaching sequence involving pupils reading an academic English text or texts for homework in preparation for a class discussion, which in turn equips the pupils to write their own text on the same subject. The aims of the discussion phase of this sequence include providing pupils with an opportunity to engage with the concepts of the challenging topic and the language they need to express those concepts, developing their understanding together and practising using the language while speaking, before having to use the same academic language in their own writing. Spoken language is less permanent than written language and there are no (red) marks made on a page to record spoken errors; rather, correct forms can be negotiated, highlighted and repeated with ease in spoken language. Therefore, a spoken phase of language practice provides pupils with a rehearsal stage using the language, before they have to produce a written product (see pp.77-78). The principle of providing opportunities for learners' spoken practice of language in preparation for writing is common in language teaching.

The original guidelines for intervention 1 for the participant co-researching teachers proposed a whole class discussion. Discussion involves a group attempt to resolve a question, which is important to the members of the group (see pp.87-88). In the case of intervention 1, the discussion question may be how to write a school assignment, it

may be the assignment question itself, or some related question designed to help pupils master the issues and language of the written assignment. In terms of sociocultural theory, discussion may position participants within their zone of proximal development thus facilitating a greater advancement of learning than if each pupil was working alone.

Intervention 2 – Teacher Acts, Class Speaks (TACS)

In its original form, intervention 2 is intended as an introductory, whole class activity: it introduces a lesson from the front of the classroom, focusing on one sentence or question, which is centrally significant to the content of the lesson. The sentence contains subject-specific terminology couched in academic syntax. The teacher mimes the sentence for the class, in a similar way to playing a game of Charades and the class suggest guesses inspired by the teacher's miming action and use of visual aids to reconstruct the exact sentence the teacher has chosen.

Discussing the use of drawings with primary age children, White *et al* suggest "[t]he use of artistic expression can facilitate non-verbal languages, empowering those with marginal linguistic skills" (White *et al* 2010, p.146). In intervention 2 the pupils interpret the non-verbal actions of the teacher and create a linguistic construction together. This intervention is called Teacher Acts, Class Speaks (TACS) (Collins 2013). On a theoretical level, the original purpose of TACS is to equip teachers with a technique to bring each individual pupil to the threshold of their own zone of proximal development in relation to the subject matter of the lesson and facilitate the acquisition of key concepts of the subject as well as academic English lexis and syntax to talk about those concepts. This learning occurs through peer collaboration as the pupils work together to re-construct the teacher's prescribed target language. This activity may appear to reflect a behaviourist approach: the teacher's target sentence should be reproduced exactly by the pupils' guesses, which elicit a positive or negative response (they are either accepted and incorporated, or rejected and abandoned). However, pupils may draw on their latent, "everyday" (native speakers) or consciously learned, "scientific" (non-native speakers) knowledge of English grammar to produce their guesses, and the feedback is as much about the teacher's

miming ability as the class' ability to interpret her actions. To relate the I-R-E sequence (p.89) to TACS: the teacher initiates (I) in the form of non-verbal communication, conveying ideas, which the class collaboratively name with academic terminology. The class' response (R) is not to answer a question, but to collaborate to provide the words for a key question (or statement) about the subject matter of the lesson.

For example, to introduce a Geography lesson on glacial erosion, the target language could be the question "How is a U-shaped valley formed?" This question contains the academic lexical term "U-shaped valley" as well as being in the passive voice, a grammatical form associated with academic English and rarely used by post-primary pupils outside of school. The teacher might take as much as 5 minutes to elicit the exact question "How is a U-shaped valley formed?" through mime and the use of visual aids. While the teacher is miming "valley", the pupils are likely to gain the familiar context of mountains, high ground and low ground and possibly the presence of water. "U-shaped" is a highly visual lexical item; to elicit the word "shape", (also used in Mathematics and Art classes) the teacher might draw shapes such as a square, circle, triangle and plus sign on the board and then proceed from there to "U-shaped" and thence to "U-shaped valley". By this stage, a few minutes into the lesson, all the attentive pupils will be aware of both the general target subject matter of the lesson and the Geography-specific English language term "U-shaped valley". "U-shaped valley" may represent a new concept and new academic language for some of the English native speakers or may be familiar from previous school experiences and/or other educational sources such as television documentaries. Similarly, for the EAL pupils this may constitute a new concept, for which they do not know a word in their mother tongue, or may be a subject they have learned about in their home language. Research has identified that subject-specific terminology is considered by teachers in Ireland to take much longer for English language learning pupils to acquire than day-to-day conversational fluency (Smyth *et al* 2009, p.181). In this way, all the pupils can acquire and understand the English term "U-shaped valley" through engaging with the teacher's actions, rather than words, in conjunction with their peers' verbalised suggestions for the target language.

During these few minutes each pupil gains the opportunity to access their knowledge of the lesson's subject area. Each may have very different pre-existent associated knowledge, for example, one may be visualizing mountainous countryside where they go walking with their family, one may be recalling scenes from a film set in the mountains, another may have relatively extensive knowledge about glaciation and be trying to remember the terms for different types of moraine, while another may be wondering about the speed of ice-flow. The subject of the lesson now has meaning for every participating child; each pupil has a concept to build on, whether it is an everyday concept arising out of normal life experience or a scientific concept, learned through educational means. Each participating pupil crosses the threshold of their zone of proximal development as they collaborate with their peers to interpret the teacher's silent actions and identify the exact prescribed target language. Thus, pupils encounter and give an English name to a key concept of the lesson. The process continues in order to frame that lexical item with the academic syntax of the rest of the question "How is a U-shaped valley formed?".

The pupils fill the verbal vacuum created by the teacher's silence with the words they associate with the teacher's non-verbal presentation. Pupils listen to each other, retain the words that are accepted by the teacher and keep using them to produce the complete target language item together. The teacher is not imposing any level of linguistic knowledge or even any one language. The teacher's silence allows each pupil to think in their own language and/or words initially, to arrive at the threshold of their own zone of proximal development, and then to display and/or increase their linguistic and subject knowledge through peer collaboration. While the pupils are shouting out their guesses, some of the suggestions may belong to the wider lexical set of academic language pertinent to the lesson's subject matter; in the above example such terms might include "erosion", "glacier" and "steep" (valley sides). This natural emergence of subject-specific vocabulary from the pupils' pre-existent knowledge of the subject benefits the pupils, helping them to focus on the content of the lesson and gain familiarity with academic language terms from each other. It may also be useful for the teacher; while remaining silent she is able to listen to what the pupils are producing, enabling her to gauge levels of subject knowledge, associated language proficiency and enthusiasm for the subject matter of her lesson.

Intervention 3 – Explicit focus on language – problem solving discussion

Intervention 3 explicitly focuses on a linguistic problem facing pupils and asks the pupils to solve that problem. Initially pupils have 2 minutes to come up with a solution in pairs, which they then have to explain to other pupils in small groups. This first small group stage has an explicit time limit. The different pairs explain their solution to each other and choose what they think is the best solution (if they can agree). By the end of the time allowed they should all be able to explain their chosen best solution to other pupils. The groups then change so that each new group is made up of members of different original small groups. The new groups discuss all the different solutions represented in their group, choose what they think is the best, and write down their jointly chosen best solution and an explanation of why they chose it together, which is then read aloud to the rest of the class. This is a combination of the "snowballing" and "jigsaw" cooperative grouping techniques (Brookfield and Preskill 2005, pp.108-9).

Forming new groups and having to explain and develop solutions to a problem to a new group of peers, has a number of language learning benefits: it is motivating, it ensures that everyone speaks, and it builds the pupils' confidence with the target concepts and language through the lesson. Pupils are motivated to engage with the activity from the start, knowing that they all have to pass on their original group's solution to a new group. It is also motivating that there is no one correct answer, but many possible answers. The simple jigsaw technique of creating new groups of pupils from members of different original groups requires every pupil to speak, because no other pupil in their new group knows the solution of their original group. By the writing stage, pupils have had real practice using the language and negotiating meanings about it with each other. They can then focus on writing a clear description and explanation together, to be read out to the rest of the class. At the final whole class stage, when each group explains why they chose their best solution, pupils should be sufficiently familiar with the relevant terminology to understand the other groups' explanations. This activity takes advantage of the diversity of heterogeneous classes for learning, as the greater the divergence between different pupils' world

views are, the more likely they are to position each other in their zone of proximal development, to cross their boundary into new understanding.

To conclude, in each intervention there is rehearsal or practice using academic language in spoken form. The focus on academic language becomes increasingly explicit through the three interventions. Intervention 1 focuses pupils on the meaning conveyed by academic texts more than their form; it provides a context within which pupils develop their understanding of subject-specific concepts, by rehearsing using subject-specific language. In intervention 2 pupils may focus on form consciously, particularly EAL pupils, or may draw on their knowledge of English without realising, while they are trying to construct a full sentence. In intervention 3 the pupils explicitly discuss their various linguistic strategies. This project explores how academic language development can be integrated into mainstream curriculum lessons by implementing these interventions or activities like them or differing from them but with linguistic aims, and developing themes that emerge from co-researching teachers' and pupils' reactions and suggestions.

Action Research

Kemmis uses the image of the music that accompanies a dance to characterize action research; the dance represents the volatile relationships between the three things action research aims to change: "practitioners' practices, their understandings of their practices, and the conditions in which they practice". It is an "endless dance" with a constant struggle for the lead (Kemmis 2009, p.463). Cook highlights the need to articulate "the mess" in action research, acknowledging the commonly experienced feeling amongst action researchers of being in a mess. Usually hidden, misunderstood and under-utilised, it may undermine the confidence of researchers overwhelmed by the "general obsession with clarity, specificity and the definite" (Cook 2009, p.279), however, she presents it as a vital part of the transformation in thinking which is a main aim of action research:

> When participants and researchers work together they mimic a kaleidoscopic lens to work with the myriad of ideas that occur in the mess of research. (Cook 2009, p.280)

Cook urges action researchers to recognize and celebrate the "messy area" and the "messy turn" as an important part of their explorations (Cook 2009, p.289). Somekh and Zeichner use a "metaphor of interpenetrating reflexive spirals of action and research" to argue that the deliberate mix of discourses of action and of research, makes action research "uniquely suited to generating and sustaining social transformation" (Somekh and Zeichner 2009, p. 6). Rebalancing language-based inequities in post-primary education is an example of such social transformation.

"Discussions abound about what characterizes action research." (Cook 2009, p.277) One area of contention is who exactly is able to carry it out. Some highly respected action researchers would not consider my project to be action research for the simple reason that I am not a post-primary teacher, but an outsider-researcher:

> [. . .] action research is always done by practitioners within a particular situation, it is insider research, not outsider research, which means that the researcher is inside the situation, and will inevitably influence what is happening by their presence. (McNiff and Whitehead 2010, p.18)

However, other authorities in the field encourage research partnerships, such as the relationship between the two participating teachers and me in this project. As explained above, (p.101) this project is motivated by my desire to cross the boundary between the private language school classroom, where I am an insider, and the mainstream post-primary classroom where I am an outsider. In order to be able to do this, I had to find post-primary teachers who were willing to work with me in an insider-outsider relationship. For the sake of clarity, given the diverse views about action research, I have adopted Somekh's methodological framework; she describes action research as

> a means whereby research can become a systematic intervention, going beyond describing, analyzing and theorizing social practices to working in partnership with participants to reconstruct and transform those practices. It promotes equality between researchers from outside the site of practice and practitioner-researchers from inside, working together with the aspiration to carry out research as professionals, with skillful and reflexive methods and ethical sensitivity. (Somekh 2006, p.1)

Somekh highlights the constant tension between clarity and complexity, both of which she values as important aims. She emphasizes the reconstructive nature of action research, as opposed to deconstruction. She presents a "broad, inclusive definition of action research" resting on eight methodological principles, (used below

to describe my research design), while also expressing the need "to destabilize the certainties that may have been suggested by the eight principles" (Somekh 2006, p.11).

Somekh's methodological principles propose that action research:
1. integrates research and action
2. is conducted by a collaborative partnership of participants and researchers
3. involves the development of knowledge and understanding of a unique kind
4. starts from a vision of social transformation and aspirations for greater social justice for all
5. involves a high level of reflexivity
6. involves exploratory engagement with a wide range of existing knowledge
7. engenders powerful learning for participants
8. locates the inquiry in an understanding of broader historical, political and ideological contexts (Somekh 2006, pp.6-8)

1. Action research integrates research and action

Somekh describes action research as a series of flexible cycles, holistic rather than divided into separate steps. They involve the collection, analysis and interpretation of data to inform action strategies planned to bring about positive change, the implementation of such strategies and further collection of data to evaluate the changes. The central spirals of action in this project were enacted in the post-primary classroom in the form of the interventions implemented by the co-researcher teachers. I collected data in my role of co-researcher through observation, note-taking and video-recording, engaging in written communication with pupils through their research notebooks, leading discussions with pupils in focus groups (some using video-stimulated recall), and recording conversations with teachers. Reflection on the data in terms of analysis and further consultation of the literature has culminated in the completion of this thesis.

Action research processes with teachers and pupils in this project
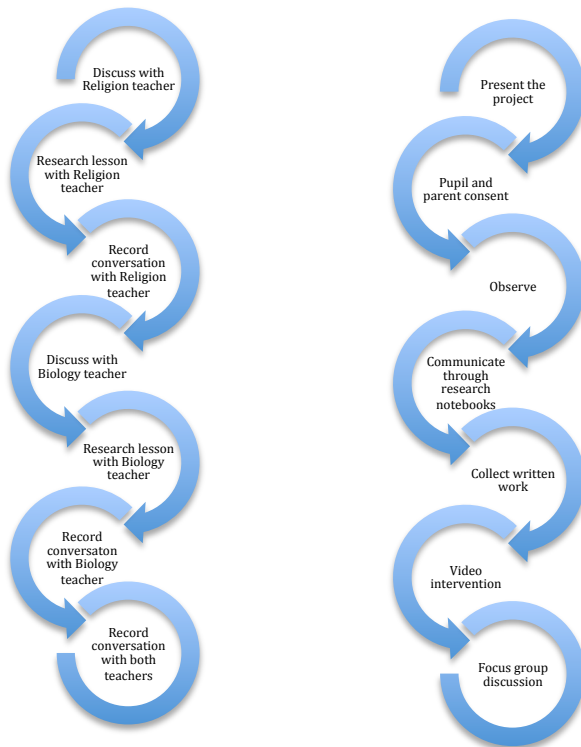
2. Action Research is conducted by a collaborative partnership of participants and researchers

> The systemic nature of human activity makes it critically important for action research to be undertaken collaboratively. (Somekh 2006, p.22)

The participants in this project are the pupils of two transition year classes (see p.18) and two of their teachers, considered co-researchers. I explained to the teachers that I saw the action research process as highly flexible and that their input as experts in their own classrooms and insiders at the school would shape how the project proceeded and particularly how my suggested guidelines for the interventions would be developed and improved. The teachers adapted the interventions to their own teaching styles in their classrooms and contributed generously about the research lessons during recorded conversations.

Contrary to the asymmetrical power relationship typical of "traditional research" partnerships where the outsider is "the one who knows" and the participant

practitioners are aspirants (McNiff and Whitehead 2010, p.18), I was very aware of being indebted to both the teachers and pupils, for their time, attention, cooperation and enthusiasm. I felt myself in an unequal power relationship, in that I needed them for my research, while they did not need me at all for anything. I was a guest in their classrooms. The project was designed to increasingly develop the pupils' confidence to express their true opinions and attitudes with the passing of time. My status as an outsider with no authority in the school may have been an advantage in this respect, as pupils may have felt more comfortable to divulge their views than if I had held a position in the school hierarchy.

3. Action Research involves the development of knowledge and understanding of a unique kind

Linguistic changes in Irish society, including the post-primary classroom, and government cutbacks in education form a significant part of the backdrop for this project (see chapter 2). All data collection took place at one CEIST (Catholic Education An Irish Schools Trust), co-educational secondary school in the province of Munster. The pupil participants had experienced the pressures of examination preparation for the Junior Certificate during the previous academic year, but had no examinations for the duration of transition year. This learning environment, designed to promote pupil personal development, was ideal for exploring questions about academic English and learning activities with the pupils.

4. Action research starts from a vision of social transformation and aspirations for greater social justice for all

The concept of academic English at post-primary level raises social justice issues associated with pupils' social class and home language (see chapter 3). Research in the Irish context highlights the lack of support for teachers facing the challenge of EAL pupils in their classes (see chapter 2) and the challenges facing the EAL pupils themselves (see chapter 3). This project started with my vision of using explicit language learning activities in all curriculum subject classes to redress the imbalances, brought into focus using the lens of post-primary level academic English.

As a teacher in the private language class context, I use active, noisy language learning activities to help learners improve their English. My research asks if similar activities might be appropriate in the post-primary classroom to balance the inequities inherent in the current system. Some pieces of this jigsaw are already established: the linguistic landscape of Irish society has changed; the education system has not been able to respond to this change as fully as is necessary; and schooling tends to maintain and reinforce the existing class structure of society. In this action research project I am exploring the possibility that my jigsaw piece, of explicitly teaching all pupils the linguistic knowledge that they need to succeed at school, might fit in to the post-primary context, to transform school into a more equitable place.

> In generating research knowledge *and* improving social action *at the same time*, action research challenges the normative values of two distinct ways of being – that of the scholar and the activist. (Somekh and Zeichner 2009, p.5, emphasis in the original)

Exploring possibilities for pedagogical improvement in response to the diversity found within post-primary classes, particularly linguistic diversity, and the promotion of children-centred research, constitutes the social justice aspect or "activist" aspect of this action research project.

5. *Action research involves a high level of reflexivity*

> The self of the researcher can best be understood as intermeshed with others through webs of interpersonal and professional relationships that co-construct the researcher's identity. (Somekh 2006, p.7)

The aspect of mediating the whole research process particularly challenges my ability to interrogate my own pedagogical assumptions and acknowledge my personal bias towards active, imaginative, noisy, collaborative learning activities. With the co-researching teachers and pupil participants, I attempted to promote relationships of mutual respect, within which I wanted to explain my position, but also welcomed and highly valued all other opinions or different perspectives that any participants wanted to express. As might be expected, the teachers were more confident than the pupils to articulate alternative opinions and point out improvements to my suggestions. The pupils were generally welcoming, friendly and willing to please, which may have predisposed them against expressing negative attitudes. While rejecting the notion

that any research can be neutral and objective, I did repeatedly examine the ways I attempted to elicit pupils' thoughts and feelings and tried to emphasize, to the pupils in particular, my wish to hear what they really felt and thought.

6. Action research involves exploratory engagement with a wide range of existing knowledge

This project draws on various different disciplines for theoretical knowledge to explore, along with the situated data produced by the research. For example, systemic functional linguistics provides the measure "lexical density" which can be used to compare the various texts collected during this project: the pupils' written school work, texts chosen by teachers for class work and Junior Certificate examination papers. The theoretical construct "lexical density" is under scrutiny as well as the texts being analysed using that construct. Progress in understanding is achieved through uncovering hidden assumptions and interrogating previously accepted ideas. Another theoretical construct underlying the exploration of collaborative linguistic learning in this project is Vygotsky's metaphor of the zone of proximal development. For example, I have to consider how this theoretical perspective fits with the child who prefers to work alone in a silent classroom (for example, P38, see p.224).

7. Action research engenders powerful learning for participants

The pupil participants gained the opportunity to consider the aspect of academic English in their education and their day-to-day classroom. They were encouraged to reflect on their own behaviour as learners and their learning styles. The focus discussion groups produced some interesting points from the pupil perspective about group work and pair work activities, the value of mime for learning, classroom noise and examination pressure. The teachers both tried out classroom activities that they would not normally use and developed their own opinions on their usefulness. The Biology teacher relates a situation where she spontaneously used mime to help a group of pupils from a different class recall some terminology (p. 182).

8. Action research locates the inquiry in an understanding of broader historical, political and ideological contexts

This refers to the value of researching the cultural contexts of the study, which in this case resulted in the writing of chapters 2 and 5.

Data collection methods

The data collected for this project comes in various forms, from different sources, each source casting light on post-primary level academic English from a different perspective. As the researcher and collector of this data I bring together the perspectives of the pupil, the teacher, the textbook writer and the examination writer. The two teachers worked with me as insider practitioner-researchers. The 57 pupils engaged (or chose not to engage in some cases) in the research in their role as experts at being transition year pupils, participating in intervention lessons and giving feedback in written and spoken form, as well as allowing their written schoolwork to be analysed. The pupils belonged to two separate classes, which I arbitrarily named green class and orange class, for the purpose of this study.

Data collection methods

From pupils	Pupil research notebooks
	Written classwork
	Focus discussion groups
From teachers	One-to-one and group conversations
	Classroom texts
	Classroom observations and video-recorded research lessons
From the State Examination Commission	Junior Certificate examination papers from 2010
From the researcher	Researcher diary

Data from pupils

Pupil research notebooks

I provided 57 pupil research notebooks for private written exchanges between each pupil and me. Pupils had already granted their permission for me to quote anonymously any comments they wrote in their research notebook, in the pupil and parents' consent form. My entries in these notebooks took two different forms: printed messages and handwritten messages. The printed messages were the same for all the members of the same class; I made multiple copies and stuck one into each of the notebooks. For example, every pupil research notebook had the same message on the first page, which I signed by hand "Mandy" at the bottom:

Thank you very much for agreeing to participate in my research project.

This is your own private research notebook. Only you and I will be allowed to see it.

You may withdraw your permission for me to quote your comments anonymously, at any time during the project.

Please write what you really think or feel about the classroom activities, especially any ideas linked to developing your academic English. Please use drawings, diagrams, lists of words, short or long comments: anything that expresses your ideas.

I will respect and value whatever you tell me.

Thank you again.

I also put an identical printed message into the notebooks of every class member before a research lesson, which asked reflection questions specific to that lesson. The

following example was for the pupil research notebooks of orange class members who attended the second research lesson implementing intervention 1 in Biology:

Thursday, January 26th 2012

You spent 10 minutes in your lesson reading about the genome. Do you think this was a good use of class time?

Do you think the book extract about the genome is difficult to read? If yes, what makes it difficult?

The small group discussions gave you a chance to practise using the vocabulary of genetics. Did your group use the vocabulary of genetics? Do you think talking about the reading with other students helped you write about it?

Generally, if you have a question about a school subject, are you more likely to ask your teacher, ask another student, or not ask the question?

Pupils were given five minutes at the end of research lessons to respond to questions like these in their research notebooks. Some of the questions asked for information, while others asked for the pupils' opinions, including inviting them to reflect on the value of a classroom activity or other issue. Writing "forces a learner to clarify her thoughts" (Moon 2003, p.8) and may prepare participants to discuss an issue orally (Baltensperger 1987), thus the research notebooks may also have served the purpose of preparing some pupils to contribute in later focus groups. The printed form of these common-to-all messages made it clear that they were questions being asked to all the pupils. My handwritten messages were more personal, responding to pupils' individual comments and sometimes asking further questions along the pupil's line of thinking. This demonstrated my appreciation of the pupil's opinions in the context of private, written exchanges. The five minutes of class time allowed for the pupils to respond represented minimal lesson disruption and left pupils free to write or not write, as they chose. The outcome of this data collection method was that 55 pupils

wrote in their research notebook at some time during the study: 9 pupils only wrote responses on one occasion, 46 pupils wrote responses on two occasions and 9 pupils wrote responses on 3 separate occasions.

Written classwork

The collection of written classwork and test scripts for linguistic analysis was an aspect of the project design, which had to be modified as the study progressed. I had not realised that there is very little regular written work during transition year, or that the participant teachers would not set any tests for this cohort. All but one pupil granted full permission for me to photocopy their regular written work and test scripts, in the relevant subjects, and then analyse their work to see if the academic language activities helped them with their writing. However, the only significant set of written work I collected comprised 49 pieces of written work about the genome, 25 from orange class and 24 from green class, after the Biology research lessons implementing intervention 1. I also collected 15 pieces of written classwork about body image, from green class after the Religion research lesson implementing intervention 2, although some of the pupils who wrote these pieces were not present in the research lesson. I calculated the lexical density of these two sets of texts, one set from the whole transition year group and one from half of the green class. I also collected 10 pieces of written classwork about addiction. These were in the form of a mind map or word list, (from a lesson previous to the research lesson implementing intervention 1) for which lexical density is not an appropriate measure. Eight of these pieces of work also included between one and four sentences on why people take drugs, written at the end of the intervention 1 research lesson.

Topic of written work	Number of scripts by orange class pupils	Number of scripts by green class pupils
The genome (Biology)	25	24
Body image (Religion)	-	15
Addiction (Religion)	-	10

Focus discussion groups

Focus discussion groups were chosen as a data collection method because focus groups are appropriate when the purpose of a study is to find a range of ideas or feelings that people have about something (Krueger and Casey 2009, p.19). Focus groups may be particularly suitable for use with children as they create a safe peer environment, which may encourage children to contribute their opinions because they hear their peers doing so. Also, the discussion may jog participants' memory, there is less pressure to respond to every question and the children are acknowledged as experts (Hennessy and Heary 2005, p.237-8). A successful discussion involves interaction between participants in the process of deliberation, which can reveal the attitudes and knowledge of the group members, whether the group comes to a consensus or not.

Researchers differ over the optimum number of participants for a focus discussion group of adolescent children; recommendations range from between four and eight (Gibson 2007, p.475), five and eight (Hennessy and Heary 2005, p.241) or up to a maximum of twelve (Hyde, Howlett, Brady and Drennan 2005, p.2590). On the other hand, Lewis suggests as relevant to group interviews Barnes and Todd's recommendation (1977) of three or four being the ideal number of 11-15 year olds working in a group (Lewis 1992, p.418). Small groups may become parallel interviews rather than discussions and this is a danger that my intended focus groups succumbed to at times, with the additional contributing factor that the participant pupils were less familiar with conducting their own discussions than responding to questions from an authority figure.

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                                          ┌─────────────────────┐
                                          │   Focus group 1     │
                                          │  20th March, n=3    │
                                          └─────────────────────┘

                                          ┌─────────────────────┐
                                          │   Focus group 2     │
                                          │  22nd March, n=2    │
                                          └─────────────────────┘

                                          ┌─────────────────────┐
                                          │   Focus group 3     │
                                          │  26th March, n=5    │
                                          │  (3 international    │
                                          │      pupils)        │
    ┌──────────────────┐                  └─────────────────────┘
    │ Focus groups after│                 ┌─────────────────────┐
    │   Intervention 2  │                 │   Focus group 4     │
    └──────────────────┘                  │  27th March, n=4    │
                                          └─────────────────────┘

                                          ┌─────────────────────┐
                                          │   Focus group 5     │
                                          │  29th March, n=6    │
                                          └─────────────────────┘

                                          ┌─────────────────────┐
                                          │   Focus group 6     │
                                          │  30th March, n=4    │
                                          └─────────────────────┘

                                          ┌─────────────────────┐
                                          │   Focus group 7     │
                                          │  10th May, n=3      │
                                          │ (international pupils)│
    ┌──────────────────┐                  └─────────────────────┘
    │ Focus groups at the│                ┌─────────────────────┐
    │  end of the study  │                │   Focus group 8     │
    └──────────────────┘                  │  14th May, n=4      │
                                          └─────────────────────┘

                                          ┌─────────────────────┐
                                          │   Focus group 9     │
                                          │  15th May, n=1      │
                                          └─────────────────────┘
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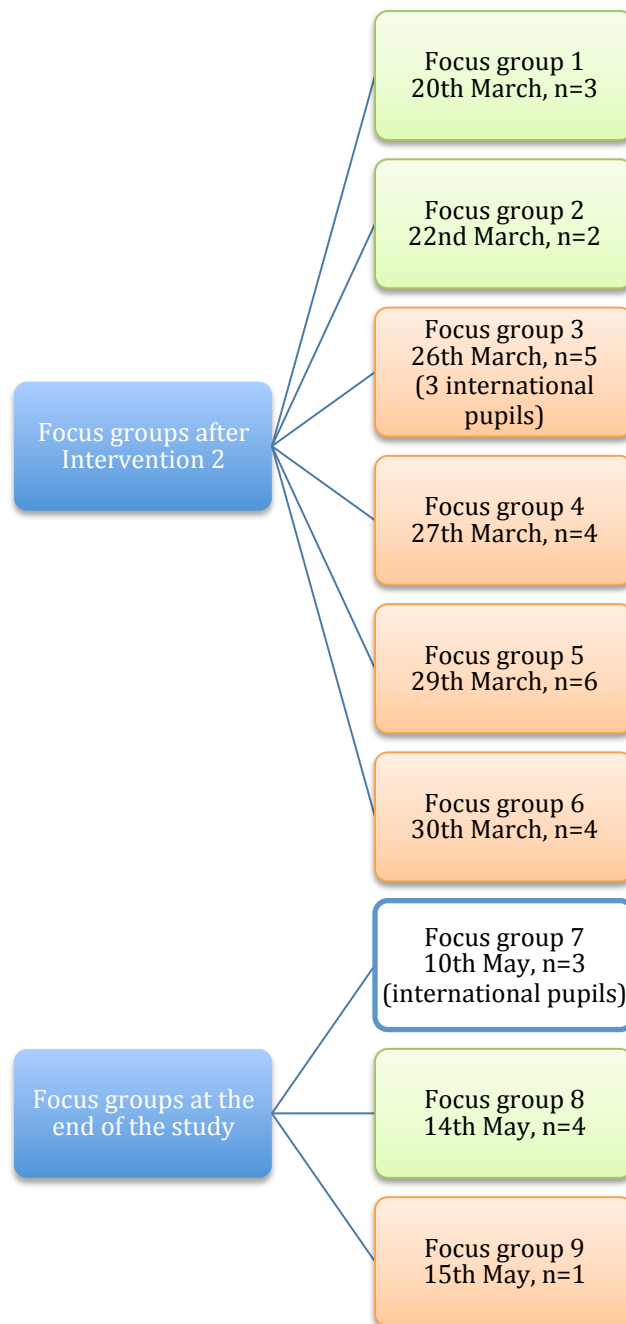
There were two phases of focus groups in this study: six groups (20 pupils in total) met in March 2012 after the research lessons implementing intervention 2 and three groups (8 pupils in total) met in May 2012 at the end of the project. There were two research lessons which implemented intervention 2: a Religion lesson with green class and a Biology lesson with orange class. I video-recorded these research lessons to facilitate the use of video-stimulated recall in the March focus discussion groups on the understanding with the participants that only the people present for the lesson

would be allowed to watch the (edited) video-recording. As only 9 pupils attended the Religion research lesson, one of whom had chosen not to participate in the study, only 8 participants from the green class were invited to the first phase of focus groups and five of these eight actually participated in the March groups. (The other members of green class were engaged in activities such as a factory visit and a sports event on the day of this research lesson). 28 pupils from orange class attended the video-recorded Biology research lesson; 19 of these 28 pupils attended the first phase of focus discussion groups. Eight pupils attended the second phase of focus groups, at the end of the study; two of these eight had also participated in the first phase of groups.

In the first phase of focus groups, for the 28 pupils from orange class who attended the Biology research lesson, I planned groups of five or six members, with approximately equal numbers of boys and girls, reflecting the class gender balance. These groups were initially selected relatively randomly, with minimal guidance from the teachers, and with the intentional placement of the three international pupils together in a smaller group of 5. To organize the logistics of this, during class time I projected my suggested lists of these groups for orange class pupils to see and rearrange if necessary, according to when they were available, aiming to keep the groups of similar size, in order to maximize attendance. When pupils missed a focus group, for example because of illness, I tried to invite them to a later group, so that they still had the opportunity to participate in this part of the study. On the occasion (15th May) when only one of the participants attended, it was the last scheduled group and the pupil was very keen to participate, so I proceeded with the session as a one-to-one interview, using the group question route, following the general principle of inclusion.

Thirty pupil participants attended focus groups. There was a wide divergence between the planned number of pupils within each group and actual attendance. I intended for groups to be comprised of four to six pupils, but in fact the number of pupil participants ranged from one (a one-to-one interview) to six.

Number of pupils attending a focus discussion group	Pupils who attended (colour indicates the pupils' class)
1	P23 ("group" 9 - one-to-one)
2	P42, P45 (focus group 2)
3	P39, P52, P59 (focus group 1)
	P3, P21, P49 (focus group 7 – EAL pupils from both classes)
4	P10, P11, P22, P26 (focus group 4)
	P12, P15, P27, P30 (focus group 6)
	P38, P40, P47, P54 (focus group 8)
5	P3, P8, P13, P21, P31 (focus group 3)
6	P1, P2, P6, P9, P24, P25 (focus group 5)

As well as the general unpredictability of transition year, and the freedom given to pupil participants to choose not to take part in research activities in this project, this reflects a more widely acknowledged difficulty, which may be inherent in organizing focus groups with young people (Hennessy and Heary 2005, p.239). "Offering choice where possible is the preferred approach to scheduling, but anticipate a logistical nightmare to plan" (Gibson 2007, p.477). Punch reports that while groups of 5 children was planned as "an appropriate number to generate a group discussion and enable all voices to be heard" (Punch 2002, p.48) in a study of 13-14 year olds, in practice the groups ranged from having three to six participants. Clearly, my experience is not the first time that research with children has appeared "chaotic" (White *et al* 2010, p.149).

All the groups were conducted in an interview room in the main school building, which was easily accessible, had one large table surrounded by chairs, no windows and few distractions and was therefore highly suitable for the purpose. At the beginning of each focus group, I supplied pens and gave the pupils their personal pupil research notebooks, so that they could look at what had been written before and add notes, if they wanted during the focus group discussion; none of the participants actually wrote notes at this time, but the opportunity was there for them.

I prepared a questioning route to guide each focus group discussion (Krueger & Casey 2009, p.7). For the first phase of discussion groups, after intervention 2, two groups made up of pupils from green class had attended the Religion research lesson and four focus groups made up of pupils from the orange class, had attended the Biology research lesson. I used seven guiding questions with the green class groups and five guiding questions with the orange class groups. Most of the questions were specific to the video-recording used for video-stimulated recall in the focus group. One question was asked to all the groups: How do you feel about writing academic English? Other questions were different for the different classes, but about the same issue, for example about group work activities. I had written the questions onto cards, which I displayed one by one, at the appropriate moment, on the table during the discussion group. Some of the cards included simple diagrams, which helped to explain the question. For example, for the question 'Would this activity be better in groups?' the diagram represented a classroom with 30 pupils arranged in rows looking at the teacher at the front of the room and a classroom with 30 pupils arranged in six groups of five pupils with the teacher in the middle of the room.

For the second phase of discussion groups, at the end of the study, there were only four questions. Four additional cards were on display within reach of the pupils for most of the discussion group; these had the words: speaking, listening, reading and writing written on them, one word on each card, and were intended to help pupils focus on the different language skills, by looking at them, pointing at them, moving them around, picking them up and gesticulating with them or whatever might help them engage with the discussion. These four cards also helped me explain the questions. One of the end-of-study groups was with three international pupils: a native German speaker and a native Spanish speaker from orange class and a native Spanish speaker from green class; this is focus group 7, which was held on 10th May. The questioning route for focus group 7 was designed specifically for the international pupils. For all the focus discussion groups there was a practice question written on a card, which gave everyone the chance to say something before the discussion proper began, to encourage participation and also to practice identifying the speaker for the sake of accurate transcription.

All the focus discussion groups comprised an introductory phase, which was audio-recorded but not transcribed and a discussion proper phase, which the participants were aware would be transcribed, analysed and represented in the study's findings, potentially in the form of quotations. During the introduction to each focus group, I thanked the pupils for their participation, reiterated the anonymous nature of the research, explained about transcribing the discussion proper and that they were at liberty to retract statements or withdraw completely from the project, ran through the questioning route with them in advance and warmed up using the practice question. The questions were designed to be easy to understand and logical for the pupils, as well as open ended to facilitate discussion. There was no need for the groups to come to a consensus, as the group level of analysis was not the primary focus. Cyr (2016) distinguishes between three units of analysis for focus groups: the individual, the group and the interaction. Interactions during pupil focus groups are of primary interest in this study to explore pupils' attitudes towards academic English and classroom activities. For the 29 pupils who both participated in focus groups and wrote in their research notebooks, these two sources of data enable triangulation at the individual level of analysis (see pupil snapshots pp.191-196).

"Saturation" is the point in conducting a series of focus groups beyond which no new ideas or feelings are being expressed (Krueger and Casey 2009, p.21). For some purposes, the point of saturation is the optimum moment at which to cease using focus groups for data collection. However, in this study, both of the notions of saturation and sampling are irrelevant, as they are overruled by the principle of inclusivity, which is of primary importance in this study.

Data from teachers

I collected data from the teachers:
- by observing regular transition year classes at the beginning of the study
- through being present for and video-recording research lessons
- in the form of written classroom texts chosen by the teachers
- through audio-recorded conversations between individual teachers and me and also the three of us together, both before and after intervention lessons

Observing regular classes gave me a valuable insight into how transition year functions in this school and the atmosphere of the classroom. Another benefit was that the pupils became somewhat used to me being in their lessons and could see that my presence was not affecting them unduly and that their usual teacher remained in control. I was able to record observations in my researcher diary to support my contributions in later discussions with the teachers. It was particularly helpful to be present for the research lessons when the teachers implemented interventions. The written texts that the teachers chose to use with their classes for intervention 1, about addiction in Religion and about the genome in Biology, provided interesting examples of post-primary level academic English for analysis (see pp.153-159). However, the most important form of data from the teachers for the purpose of answering research question 2 of this project is their comments in the multiple audio-recorded conversations we had over the course of the study. There were six conversations: four were one-to-one between one teacher and me, and two were three-way conversations. The majority of the contributions in these conversations were from the teachers.

Audio-recorded conversations with teachers

14th December 2011		Religion teacher
20th January 2012	Biology teacher	
8th February 2012	Biology and Religion teachers together	
26th March 2012		Religion teacher
20th April 2012	Biology teacher	
27th April 2012	Biology and Religion teachers together	

The first two individual conversations were about intervention 1. The conversation on 14th December 2011 took place immediately after the Religion teacher had implemented all of intervention 1 with green class in one research lesson. (The Religion teacher was not timetabled to teach orange class). The Religion teacher commented extensively about the intervention and issues arising from its implementation. The Biology teacher implemented intervention 1 with both

transition year classes, over two lessons with each class. The conversation on 20th January 2012 took place between these research lessons 1 and 2 of intervention 1. On 20th January 2012, the Biology teacher commented on the reading and discussion activities, which had happened in the first lessons and we discussed and planned the writing activity, which was to happen in the second lessons.

The third conversation was on 8th February 2012. I provided some general feedback from the pupil notebook comments which I thought would interest the teachers, then gave them a revised version of the intervention 1 guidelines for teachers, which incorporated changes made in view of their pupils' and their own attitudes and opinions as expressed in the study so far. The teachers discussed the revised guidelines for intervention 1, including a second revised version, which includes rationales for the various activities. During the second half of the conversation I demonstrated the miming activity of intervention 2 with the teachers and we discussed the implementation of intervention 2.

The Religion teacher implemented intervention 2 with green class on 14th March 2012 with 9 pupils present. The recorded individual conversation between the Religion teacher and me happened twelve days later, on 26th March, after the two focus discussion groups with the participant pupils had also taken place. The Religion teacher commented on various aspects of intervention 2 and we discussed the implications. I provided some anonymous pertinent pupil perspectives gleaned from the pupil focus discussion groups. The Biology teacher implemented intervention 2 with orange class on 20th March 2012 with 28 pupils present. The recorded individual conversation happened a month later, after the Easter holidays, on 20th April. Four focus discussion groups with the participant pupils had taken place before the Easter holidays. The Biology teacher commented on applications of the miming technique of intervention 2 and the general group dynamics of orange class, and we discussed issues raised by her research lesson.

The final recorded conversation was on 27th April 2012. The two teachers explained to each other how they had implemented intervention 2 and discussed a revised version of the teachers' guidelines, which I provided, as well as various implications and classroom uses of mime. The teachers explained that it was not realistic to

implement intervention 3 with the transition year pupils in the remaining few weeks of the academic year, however they discussed the suggested teachers' guidelines for intervention 3 during the conversation, generating valuable data.

I began each of these recorded conversations with the reminder that I would give the teachers a copy of my transcription of their conversations, so that they could ensure there was nothing recorded and transcribed that they would prefer not to be quoted afterwards. I also reiterated the guarantee of anonymity. Neither of the teachers objected to anything contained in the transcriptions. This method of data collection, audio-recorded conversations, was highly appropriate to the situation, as the teachers had a lot to say, and needed very little prompting. My contributions to the conversation were often motivated by wanting to add information, rather than trying to elicit more from the teachers. The freedom of having no prescribed questioning route to follow meant that the teachers could express what was important to them and left me free to ask questions following their perspectives. The printed copies of the teachers' guidelines, either the original versions or the revised versions, provided a valuable focus point, from which to start and to which the conversation could return, and aided the successful functioning of this data collection method.

Researcher diary

The researcher diary is an important companion to the action research process (Altrichter, Posch and Somekh 1993, p.10), an integral and unifying feature, sustaining continuity within a project. The researcher diary facilitates reflection immediately or soon after data collection activities, thus encouraging the researcher to make connections between different aspects of the research and to articulate related insights. Interpretative sections of a researcher's diary include speculations, feelings including worries, ideas, hunches, explanations of events, the development of theory and reflection on personally held assumptions and prejudices (Altrichter *et al* 1993, pp.20-21). It is an important aspect of the researcher diary that it is personal and private; the researcher is under no obligation to share any part of the diary with anyone else at any time. Conversely the researcher must act ethically in using data recorded in the diary about events outside of the scheduled project activities. For

example, a comment made by a teacher during a casual conversation in the staff room cannot be quoted publicly, even anonymously, without clearance from that teacher. Altrichter *et al* recommend that research is never allowed to become covert (Altrichter *et al* 1993, p.24).

My researcher diary for this project is a pink, hardback notebook. I include in it anything that I think I might need to remember in the short term or the long term, which might improve my understanding of the research context or support the smooth running of the project. Among the many different types of written entries there are: records of electronic messages and telephone calls to and from participant teachers, notes made during class observations and research lessons, accounts of visits I made to the school including unscheduled events such as an unplanned meeting with a participant, reflections upon how intervention guidelines could be improved in the light of pupils' and teachers' comments, potential findings from initial analyses of data, various lists of pupils such as those scheduled to attend focus groups, plans of what to say to participants at the beginning of data collection activities, summaries of progress made, recommendations from the Social Research Ethics Committee, and various other summarizing lists. Some entries represent a conscious attempt to address a problematic issue through writing about it. Memos written on NVivo during the data analysis stage of the project are a continuation of this technique, using the electronic medium rather than pen and paper. I used my researcher diary for the planning, action and reflective stages of various mini-cycles of this action research project. For example, before a recorded conversation with a teacher I would plan in my researcher diary what I needed to say at the beginning of the conversation, such as about the participant teacher's right to retract statements and the guarantee of anonymity, and I would list possible questions I could ask, as a reminder to myself. During the conversation I might refer to these notes, which would be open in front of me. After the conversation and/or during the transcription of the recording, I might write reflective comments about the conversation, noting ideas that might occur to me and possibly linking them with notions from theoretical or other sources.

Materials used throughout the process of data collection

Phase of project	Materials used
Gaining access to the field of study	Letter to post-primary principals and their board of governors
Introducing the project to the participants September 28th – October 18th 2011	Flashcards for transition year staff meeting 5 minute presentation
	Teachers' information letter and consent form – Term 1
	Printed script of short dramatic sketch entitled "In Mandy's Dreams", acted out by transition year pupil volunteers during the initial presentation of the project to pupils on 18th October 2011
	TY pupils and parents' information letter, consent form (English, Spanish, German and Polish versions) and sticky label
Gaining pupils' and parents'/guardians' consent October 18th – December 1st 2011	TY pupils and parents' information letter, consent form (English, Spanish, German and Polish versions) and sticky label
	Letters to pupils who had not yet returned their consent forms on 24th November
Observation of regular classes December 5th – 9th 2011	Researcher diary
Intervention 1 December 14th 2011 – February 8th 2012	Intervention 1 guidelines
	Pupil research notebooks
	Printed messages with reflection questions, stuck in to every pupil research notebook, to elicit pupils' comments in addition to individualized handwritten messages from me (also intervention 2)
Intervention 2 February 21st – April 27th 2012	Intervention 2 guidelines
	Pupil research notebooks
	Flashcards for pupil focus groups
	Edited video-recordings of research lessons, for use in pupil focus groups
Intervention 3	Intervention 3 guidelines
End-of-study focus groups May 10th – 15th 2012	Cards with questions and other prompts written on them

Data analysis

Three methods of qualitative data analysis are employed in order to answer this study's research questions:

1. linguistic analysis
2. descriptive analysis
3. thematic analysis

Linguistic analysis of post-primary academic English texts

The purpose of undertaking a linguistic analysis of various written texts collected during this project was to generate a picture of what post-primary academic English looks like, at least for the participant pupils. Unfortunately pupils are not required to produce much written work during transition year at my research site school, so I collected only a minimal amount of pupils' classwork for analysis. However, I performed a linguistic analysis of the texts collected from pupils, printed classroom texts chosen by the participant teachers, and Junior Certificate examination questions, aiming to identify features of academic English (or other genres). This included attending to thematic structure and measuring the lexical density of these written texts, thus providing some means of comparison from systemic functional linguistics (see pp.84-85).

Descriptive analysis of pupil and teacher attitudes towards the interventions

An initial descriptive analysis of pupils' and teachers' reactions towards the three classroom interventions of this study (pp.168-190) provides, for each of the interventions, a straightforward, direct answer to research question 2: What are pupils' and teachers' attitudes towards classroom interventions designed to integrate academic language development into lessons? For interventions 1 and 2, this is detailed, thick description of pupil data and teacher data and for intervention 3 it is based on the final conversation with teachers, when the intervention was discussed,

but it was agreed that it would not be possible to implement it during the time remaining in the academic year.

Thematic analysis of data

In order to perform a wider-ranging analysis of all the data collected through pupil research notebooks and focus discussion groups, as well as conversations with teachers, thematic analysis is employed, following the six phase guide outlined by Braun and Clarke as "a method for identifying, analysing and reporting patterns (themes) within data", (Braun and Clarke 2006, p.79). This analytic method offers the flexibility required by an action research project and acknowledges the active role the researcher plays in the analysis of qualitative data, not merely discovering themes or noticing themes emerge, but actively identifying, selecting and reporting patterns of interest to a study. NVivo software offers a database to manage and manipulate the data, facilitating triangulation, providing tools for searching texts for words and phrases, enabling the creation of groups and linking of similar items, cross-referencing and interrogation of parts or the entire data set.

The six phases of thematic analysis are:
1. familiarization with the data
2. generating initial codes
3. searching for themes
4. reviewing themes
5. defining and naming themes
6. producing the report (Braun and Clarke 2006, pp.87-93)

1. Thematic analysis phase 1 involves familiarization with the data

Before coding begins, researchers immerse themselves in their data. This involves reading all the data in an active way, looking for meanings and patterns. In this study, as the data collection instrument, I interactively collected the data myself, edited the video-recordings into short collections of extracts for use in the focus discussion groups for the purpose of video-stimulated recall, and transcribed the

audio recordings. I wrote an analytical memo based on early stage hunches I had about potential findings and continued to write memos within the NVivo software throughout the data analysis process. Before starting to code, I re-read the transcripts and listened to the recordings of pupil focus discussion groups and conversations with teachers, and also created electronic documents for the pupil research notebook comments, so that this material could also be included in the NVivo database. I intentionally retained pupils' spelling and other written errors in these transcriptions. The cases created in NVivo for this project are the individual participants: the pupils are named P1 to P59, with S for the Science teacher, T for the Religion teacher, and RP (researcher participant) for my codable contributions during the recorded conversations with teachers. P28 is the pupil who moved to 5th year and so did not participate in the study. P4 did not contribute any kind of data. P36 only contributed written classwork. R is used for my utterances in focus discussion groups with pupils and my handwritten comments in pupil research notebooks, none of which are coded.

2. Thematic analysis phase 2 involves generating initial codes

> A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data. (Saldaña 2013, p.3)

With the backdrop of overall familiarity with the data, the context of the field of research and the associated theoretical literature, initial coding zooms in on the smallest units of raw data, to identify features that appear interesting to the analyst and to organize items of data into meaningful groups (Braun and Clarke 2006, p.88). The research questions of this study aim to identify pupils' and teachers' attitudes in order to inform academic language development to the benefit of all pupils. Therefore my initial coding is intended to be as bottom-up or data-driven as possible, aiming to identify and reflect first pupils' attitudes and then to add teachers' perspectives once an initial codebook is created from the pupils' data.

Using NVivo for coding facilitates the identification of both repeated, commonly occurring opinions and one-off, unusual ideas expressed by pupils. The out-of-the-ordinary individual points of view can be interesting to investigate as snapshots

contrasting with the dominant viewpoints, highlighting the diversity of attitudes contained in the data (see pp.191-196). NVivo also allows items of data to be assigned to multiple codes, categories and themes and later to be deleted or merged, leaving the analyst free to think creatively, question assumptions, and re-categorise, thus benefitting from the flexibility of the programme.

3. Thematic analysis phase 3 involves searching for themes

In phase 3 the focus zooms out again as codes produced during phase 2 are grouped together under potential themes. This involves consideration of the links between different codes and may result in creating a hierarchical thematic structure, headed by main overarching themes with sub-themes beneath them, each containing a group of thematically linked codes. Braun and Clarke recommend representing the thematic structure visually, in a table, as a mind-map and/or by writing each code onto a piece of paper and organizing the pieces into theme-piles. The initial thematic map and collection of candidate themes and sub-themes produced at this stage will be tested in the later phases for how well they fit the data.

Braun and Clarke present their six-stage framework as flexible, aiming to guide researchers through the non-linear, recursive process of analysis, rather than to prescribe fixed rules. They suggest that all data should be coded before phase 3 begins. In this study, however, because I wanted to be able to present pupil perspectives from the pupil data, I produced various visual representations of the pupils' data to explore potential themes it might contain first (p.197; p.200; p.216), before coding the data generated with teachers.

4. Thematic analysis phase 4 involves reviewing themes

> Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes. (Braun and Clarke 2006, p.91)

In phase 4 the candidate themes produced in phase 3 are scrutinised to see how faithfully they reflect the data. It is to be expected that some candidate themes will be

found not to have enough data to support them, or that the supporting data is too diverse. So, for example, during this stage two closely associated candidate themes might become one theme, or one theme might need to be broken up and its data extracts redistributed to other themes, or possibly discarded from the analysis.

There are two levels to phase 4: the level of the coded data extracts is level 1, and the level of the entire data set is level 2. Level 1 involves discerning a coherent pattern created by all the collated data extracts associated with each separate theme. The analyst must re-read all the data associated with each theme in turn and produce a satisfactory candidate thematic map. This is then re-examined in the context of the entire data set. Reading all the data to test each theme as an accurate reflection of the data may lead to coding additional data, which may have been missed earlier in the process. This type of improvement is to be expected and may lead to new themes being identified and a return to the coding process for such new themes. The aim of stage 4 is to produce a satisfactory thematic map and

> have a fairly good idea of what your different themes are, how they fit together, and the overall story they tell about the data. (Braun and Clarke 2006, p.92)

5. Thematic analysis phase 5 involves defining and naming themes

Stage 5 involves writing about each theme, identifying what is interesting about the data associated with that theme and explaining why it is significant. Thus the data extracts for each theme are organized into "a coherent and internally consistent account, with accompanying narrative" (Braun and Clarke 2006, p.92). Stage 5 may involve identifying sub-themes, or themes-within-a-theme. Each theme is also considered in relation to the other themes, aiming at minimal overlap. The themes should be given concise names, which convey the sense of what the theme is about.

6. Thematic analysis phase 6 involves producing a report

The write-up of a thematic analysis should provide a "concise, coherent, logical, non-repetitive and interesting account of the story the data tell" (Braun and Clarke 2006, p.93) as well as demonstrating the merit and validity of the analysis. It should

include data extracts as evidence for themes, making an argument in relation to the research questions. The reason for following these thematic analysis procedures is to be able to produce a report that goes beyond mere description of the data, to a deeper level of interpretative analysis. For this project, the thematic analysis of data collected from pupils and teachers aims to identify, from their perspectives, the factors that need to be addressed to offer an adequate answer to research question 1: How can academic language development be integrated into mainstream curriculum lessons to the benefit of all pupils in a multilingual post-primary context?

Chapter 7 – Findings

This chapter presents three different types of findings: linguistic, descriptive and thematic. It begins with findings resulting from linguistic analysis, providing a description of post-primary academic English specific to this particular research context: the transition year Biology and Religion classes taught by the co-researching teachers of this study. The data this description is based upon is comprised of texts from the Junior Certificate examination papers for Science and Religion which these pupils took in their public examinations in 2011; texts chosen by the teachers for use in the classroom during research lessons; and texts written by the pupils during or subsequent to research lessons.

The second section of findings (pp.168-196) is based upon data collected from teachers in audio-recorded conversations, from pupils in their research notebooks and focus discussion groups and from the researcher diary. This second section presents a detailed thick description of the reactions of pupils and teachers to the three interventions of this study, thus offering an answer to research question 2: What are pupils' and teachers' attitudes towards classroom interventions designed to integrate academic language development into lessons? Four snapshots of extraordinary pupils augment this thick description, elucidating the diversity encompassed in this pupil cohort. Where pupils' written contributions are quoted, spelling and other errors have been retained.

The third section (pp.196-226) presents the findings of an in-depth thematic analysis of the same sets of data as section 2. As a report produced by thematic analysis, this section goes beyond a surface description of the data to make an argument in relation to the research questions (Braun and Clarke 2006, p.93). In this study, three themes were identified: academic language, learning, and classroom interactions.

Post-primary academic English specific to this study

The Junior Certificate public examinations that the participant pupils of this study took at the end of their first three years in post-primary school probably represent the most immediately significant academic English that they had encountered in their lives by the time of the research. Third year teaching schemes tend to focus on examination preparation, which may include familiarizing pupils with the form of both the expected examination questions and the answers they are intended to elicit. An analysis of the relevant Junior Certificate 2011 examination papers provides an insight into post-primary level academic English, as prescribed by the State Examination Commission (SEC) and encountered by the participant pupils as important for their progression in education. Examination questions, however, generally do not include extended text. This is provided by classroom texts, chosen by the participant teachers for the pupils to read in research lessons implementing intervention 1. These are examples of longer pieces of writing, intended to be read for educational purposes. The pupils' written classwork, produced during interventions 1 and 2, displays a range in the level of academic English the participant pupils can produce. I offer the following analyses of these three types of text to exemplify in real terms the post-primary academic English discussed in chapter 3 and also to portray the academic English that is familiar to the participant pupils, whether they are consciously aware of it or not.

Junior Certificate examination questions

The next two sections provide a detailed analysis of the form, particularly the linguistic form, of the relevant public examinations taken by the participant pupils at the end of the academic year preceding their transition year. The purpose of this is to explore the extent to which pupils' English language proficiency was tested in the subjects Biology and Religion, as well as to exemplify academic English that has been significant for the participant pupils. There are different levels of SEC examinations and choices of subjects, but the same SEC papers are taken by all pupils at the same level, irrespective of their language of instruction or their mother tongue.

Biology in Science Junior Certificate 2011

The Biology section of Science (ordinary level) Junior Certificate examination 2011 contains six pages (State Examination Commission 2011b). There are three questions made up of multiple groups of sub-questions, all of which are compulsory. Question 1 is worth 52 marks, which is 40% of the marks, questions 2 and 3 are worth 39 marks each (30%). Many of the answers involve writing one word or phrase on a short line, or in a table provided for this purpose. Where extended text is required, more space is given. Other questions require indicating a choice of word from a list by writing a letter next to the chosen word in a table, which corresponds to a label on a diagram. The letter to be written may be an arbitrarily assigned "A", "B" or "X", or a letter with significance, for example the letter "W" signifying "waste", "A" signifying "animal" and "W" signifying "wind". Scientific conventions appropriate to Biology, such as labelling items in diagrams and presenting information in table form, are used throughout the Biology section. However, the convention of entitling diagrams and tables is not used; instead some sub-questions begin with a sentence fulfilling the same function as a title, for example "The diagram shows a microscope", while other sub-questions do not explain the image they are associated with in any way. Headings are used in question 2, section (d) where candidates are asked to describe an investigation (see below, p.146). Most of the instructions use imperative verb forms, for example "Write" and "Name". The instructions include words highlighted using bold font, although it is difficult to pinpoint the reason for this. Overall the questions have a lexical density of 61%, with the individual pages ranging in lexical density from 57% to 65%.

Question 1 contains eight sections with sub-questions; seven of these sections are based on an image, such as a photograph of a microscope or a diagram of a human skeleton. The eighth sub-question requires the candidate to draw a diagram of a piece of equipment as well as to name it and explain its use. On the first page 29% of the words are in bold font. The reason for this liberal use of bold font is not clear. For example, in the opening sub-question:

> **Write** the letter **B** beside the **function** of the part labelled **B**.

"**Write**" is probably highlighted because it is the main instruction. "**B**" is probably highlighted to distinguish it from "**A**", which is used earlier in the question. "**function**" is probably highlighted to indicate that the question is about functions, for example "magnifying", and does not ask for the names of the parts of the microscope, for example "lens". So, in one sentence, bold seems to be used to highlight words for three different reasons. Other sentences do not follow these three criteria. For example the previous instruction is identical apart from that the letter is "**A**" instead of "**B**" and "Write" is not in bold. The use of bold font does not appear to follow any consistent or useful pattern. Another aspect of the instructions is their high lexical density, indicating that the questions bear characteristics of academic English. Despite this linguistic density, many questions ask for a simple action to be performed, such as writing one letter in a choice of three boxes in a table. This is a form of multiple choice question, using a table instead of the familiar A, B, C options, however the instructions that accompany the question are linguistically complex and potentially confusing:

In the table write the letter **X** beside the **name** of the part labelled **X**

If this question is designed to test the candidates' ability to follow instructions to write in a box in a table, this is not made explicit. If this question is intended to test only candidates' knowledge of the subject specific term labelled **X** in a diagram, there are other, simpler ways of testing this knowledge, without involving sentences with successive prepositional phrases, for example the standard multiple choice question form. The eighth sub-question refers to a piece of equipment the candidate has used personally; this personalisation is expressed using the passive form "used by you". Later in the same sub-question the fact that the candidate has used the equipment is lost altogether in another impersonal passive voice sentence:

Explain how it was set up or used.

Question 2 is presented in two parts. The first half of question 2 is based around four more tables, with accompanying instructions that follow a similar pattern to that quoted above, sometimes omitting the opening phrase "In the table" and sometimes including it. Other instructions include to "answer the (following) questions", although the associated directions are not in the form of a question, but rather have imperative verbs, directing the candidates' actions. This might be a source of

confusion for a candidate who expects questions to be marked by auxiliary verbs and question marks. In fact there are no question marks anywhere in question 2. The second half of question 2 is section (d), which asks candidates to describe an investigation. No main heading is given or required for this, but the headings "Equipment", "Procedure" and "Result" are given, with four, seven and four lines respectively provided as space for candidates to write their answer. This is preceded by the only instruction in the entire Biology section that uses a modal verb: "The headings below may be helpful". This seems confusing, as the layout clearly directs candidates to write under each heading and to choose different headings would involve crossing out or ignoring part of the printed rubric. An instruction "Use the headings below" would be consistent with the pattern of the rest of the instructions.

Question 3 has three sections, all of which include grammatical questions ending with a question mark, but displaying a range of grammatical forms in terms of verb tense and voice. Some of these questions, in sections (a) and (b) begin "Which part . . ." and so there is no auxiliary verb, but a third person present simple tense verb form: "forms", "controls", and "takes in". Section (b) contains a question form quite different from the rest of the examination: "What would you expect to happen . . ." followed by a string of four prepositional phrases. Section (c), describes a Biology investigation, including a diagram showing four test tubes. There is no title, but the question opens with "A student investigated the conditions needed for germination", a sentence with an active voice verb, in a context where the convention is to use a passive voice verb. The choice of "A student" as the Theme of this sentence seems somewhat surprising in this scientific context, where the candidates are likely to be familiar with the passive voice. The question continues with three sentences describing the investigation, the first using past passive verbs and the second and third using active voice past verb forms. The third sentence conveys a negative meaning, but uses a positive form of the verb "fail", which has a negative meaning, with the infinitive verb "to germinate". As well as other instructions, there are three past simple tense questions, all referring to the investigation, beginning with "Why" and ending with a question mark. Two of these questions are in the active voice, using the auxiliary verb "did" with the main verb "fail", (again the positive form verb, with a negative meaning), followed with the infinitive form "to germinate". The third question is in the passive voice, using the auxiliary verb "was" and the past

participle "used". This passive voice question, in particular, seems unnecessarily confusing as it also contains two other words which end in "ed", which could be confused as the past participle acting as the main verb, rather than as an adjective:

Why was cooled boiled water used in test tube **D**?

Overall, there is an inconsistent use of active and passive voice and a confusing variety of question forms in question 3. The level of mastery of English grammar required to understand the questions is above the Common European Framework of Reference for Languages B1 level (see p.28). Another confusing inconsistency concerns the case: upper case or lower case, of words given for candidates to choose from and then write (copy) as their answer. Question 3, section (a), includes a box with a list of six subject specific lexical items written in upper case (and in bold), the only instance of whole words being written in upper case in the whole Biology section of the examination. A different list of three subject specific technical terms is included in question 3, section (b); in this case only the first letter of each term is capitalized. The instruction reads,

"Choose a word from the list on the right, to correctly complete the statement below.

The layer of oil is used to prevent . . ."

This question seems to be intended to test candidates' lexical knowledge of the three terms. It is probably not intended to test whether or not pupils change the upper case first letter of the word with which they choose to complete the statement into lower case, nor to disadvantage pupils whose mother tongue capitalizes the first letter of all nouns. It is not made explicit whether this linguistic aspect is part of the test.

To summarize, there are a number of linguistic aspects of the Biology section of the Science Junior Certificate examination 2011 which indicate that the examination is testing English language proficiency, as well as subject knowledge. The inconsistent use of the passive voice is confusing, particularly in question 1, section (h) which involves personalisation (referring to equipment that the candidate has used), as the passive conveys a sense of distance, essentially the opposite effect to personalisation. Along with this, the range of grammatical structures demands English proficiency well above the Common European Framework of Reference for Languages B1 level,

at which EAL pupils are no longer entitled to language support in school. Another source of confusion, particularly for EAL candidates, is the repeated reference to "questions" when there is no grammatical question form, but instead the imperative form is used to instruct pupils how to answer. Similarly, the use of the verb "fail" instead of using "not" and the accompanying pattern with an auxiliary verb to convey negative meaning, may confuse candidates. The rubric has a high lexical density, reflecting language that overcomplicates instructions which could be much simpler. The inconsistent use of bold font and upper case may also contribute to candidates' confusion.

Religious Education Junior Certificate 2011

The Religious Education ordinary level Junior Certificate examination 2011 (State Examination Commission 2011a) comprises fifteen pages, including space given for candidates to write their answers. There are guidelines and instructions for candidates, although in some of the questions how to answer is not explicitly stated (see pp.151-152 below). Overall the guidelines and instructions have a lexical density of 57%, with the lexical density of the individual pages ranging from 50% to 59%. The "postcard" text of section 3 has a lexical density of 45%. The Religious Education Junior Certificate examination 2011 is divided into four compulsory sections; involving a choice of questions within sections 1, 2 and 4. The instructions use a mixture of declarative directions using modal auxiliaries, for example "You should" and "You must", and imperative form commands, for example "Read . . . and answer . . ."

Section 1 uses various question forms:

- read a sentence to decide if it is true or false
- read the beginning of a sentence and complete it, explaining a reference
- read two lists to match one term from each, with each other
- read an example of something and then write a second example
- multiple choice to indicate a correct definition of a term

The grammatical complexity of these questions varies. For example, the matching questions all follow the same highly complex pattern, involving a passive present perfect verb "has been matched", a relative clause introduced with "with whose/with

which" followed by another passive voice verb form "is associated". The performer of the action of the passive verbs "matched" and "associated" are not the same person.

One location	has been	with whose founding story	it is most
One prayer	matched to the		associated as an
One sacred text	world religion	with which	example for you.

A grammatically simpler form of this question could be:

Match one	location	with one	world religion. Here is an example.
	prayer		
	sacred text		

The form of these matching questions in the 2011 examination are another example of the intention of a question, in this case to test subject knowledge about world religions, being hindered by the potentially bewildering linguistic form of the question. Compare these matching exercises with the section 1 question which has a much more familiar grammatical form:

Jesus was born in Jericho.   True/False

This also contains a passive verb, but it is one that is used in conversational as well as academic English. Most fourteen-year-old pupils taking public examinations in Ireland, whether native English speakers or not, would be able to produce the sentence "I was born in . . ." so this is an example of a question testing subject knowledge, unimpeded by unfamiliar language. The fact that the pattern of the matching exercise given above is used for all three matching questions suggests that the SEC has intentionally standardised this form for this type of question, despite the implications of its linguistic complexity.

In section 2, all the questions are based on a visual prompt. Each question has three parts; they ask for: identification of one aspect of a photograph, another example of the subject of the photograph and a reason for behaviour associated with the

photograph. Limited space is given for the answers, with no indication of the form the answer should take, for example a full sentence or a single phrase. The imperative verbs of the questions are: "pick", "give" or "name", and "state".

Section 3 is based on a textual prompt, presented as the text of a postcard. It is an unusual example of a postcard in that its objective tone conveys an inappropriate sense of formality. It begins with "Hi Jo, Greetings from . . ." but has no closing formula, such as "lots of love" or "see you soon". The text is long for a postcard (222 words), typed rather than hand-written, and consists of full, grammatically correct sentences. Compared to section 2, more space is provided for the answers to the questions in section 3. Two questions again ask for reasons using the imperative verb "explain", rather than "state" used in section 2. Other instructions include "describe an example" and "outline what is involved in . . ." The marks awarded for each question, the space for the answer and these instructions are the only indications of the form the answers should take.

Section 4 carries half the marks and half of the recommended time allocation of the examination and involves answering five from a choice of six separate groups of questions. Each group of questions begins with one part asking for a quick answer, such as:

- read a sentence to decide if it is true or false
- multiple choice to indicate a correct definition of a term
- give an example

The sub-questions which follow then ask for extended written answers, suggested by the amount of space provided, and again using the instructions:

- "explain a/two reason(s) why . . ."
- "describe what is involved in . . ."
- "outline how . . ."
- "describe/outline what happened"
- "describe/outline one example"
- "describe one/two way(s) in which . . ."

The use of bold font and upper case is consistent throughout the examination rubric. Upper case is used only for the instructions at the beginning of each section and for words in section 4 from which candidates have to make a choice. Bold font is used in the instructions at the beginning of each section. In section 2, each question has a title in bold font. Within the questions, bold is used sparingly and consistently to clarify the questions; the only words in bold font are: "**one**", "**two**", "**another**" and "**each**".

Scrutiny of the entire examination paper reveals the repeated occurrence of the question pattern:

"In religious traditions the term "A" refers to . . ."

This pattern appears eight times in section 1 and again twice more in section 4, with the task being to complete the sentence, although this instruction is not given explicitly. Candidates who are not familiar with the verb "refer" and its associated patterns are therefore at a disadvantage to candidates who have practised using "refer" (Snow 1990, see p.50). This is further exacerbated by the fact that the first time this pattern appears, in section 1, question 1, which is a "True/False" question, the sentence continues with a noun introduced by the indefinite article:

"In religious traditions the term 'schism' refers to a division or split . . ."

Only one of the following nine questions of this grammatical pattern, when the task is to complete the sentence, are naturally continued with a noun introduced by the indefinite article, so candidates who copy the pattern given in the opening question, possibly thinking it is an example of the correct structure, will produce a grammatically incorrect answer. Appropriate continuations of the other nine instances of this pattern include using a variety of structures: "when" to introduce a clause, a gerund such as "thinking", using a gerund introduced with the definite article such as "the uniting of", a noun introduced by the definite article, such as "the righteousness" or without any article, such as "faith". For example:

"In religious traditions the term . . . . . refers to

- when someone speaks . . ."
- thinking deeply about . . ."
- the uniting of . . ."

- the righteousness of God"

- faith in God"

These ten questions, from sections 1 and 4, potentially representing 24% of the marks, assume the candidates' familiarity with this linguistic pattern. Success in these questions also requires familiarity with the task of completing a sentence, as no explicit instructions are given.

To summarize, there are a number of linguistic aspects of the Religion Junior Certificate examination 2011 which indicate that the examination is testing language proficiency, as well as subject knowledge. Knowledge of subject specific terminology, such as "persecution" and "ecumenism", is part of what is intentionally being tested, however, the highly complex sentence structures, such as those described above in the matching exercises require English proficiency well above the Common European Framework of Reference for Languages B1 level. The Religion examination questions are designed to follow more standardized patterns than the Biology examination questions. This design may reflect the fact that choice of question is offered in the Religion paper, but not in the Biology paper. However, the SEC do not seem to have addressed the implications of the linguistic complexity of these standardized question forms. The Biology examination questions always state explicitly what is required of the candidate, where the Religion paper is inconsistent in this aspect and repeatedly expects the candidate to know what to do, without explicit instructions.

To conclude, it is clear from this analysis that there is a strong linguistic aspect to what is being tested in the Biology section of Science, and the Religious Education ordinary level Junior Certificate examinations of 2011, involving familiarity with complex grammatical structures as well as subject specific lexis. These grammatical aspects are part of the hidden curriculum of schooling (see pp.74-75). Candidates whose home backgrounds constrain their familiarity with academic English are at a considerable disadvantage because of this (see pp.43-51), including the significant minority of EAL candidates. The Junior Certificate examinations 2011 probably represent the most immediately significant academic English that the pupil participants of this project had encountered in their lives by the time of the study.

The above analysis of these two examination rubrics reveals that this academic English is indeed very different from conversational English. Unfortunately it contains confusing inconsistencies on multiple levels: presentation, explicitness of instruction, standardization of question form, form and meaning, and grammatical complexity, as described above. Pupils preparing for the SEC Leaving Certificate examinations at the end of their 6th year, may not feel confident that they will be able to understand the questions well enough to produce the required answers. During this project, many of the participant pupils were slow to grasp the concept of post-primary level academic English; their encounter with the Junior Certificate examinations of 2011 may have contributed to this difficulty.

Classroom texts

This project includes three written classroom texts, chosen by the participant teachers for the pupils to read in research lessons implementing intervention 1; two of these texts were used together in Religion with green class, and one was used in Biology with both the transition year classes. The Biology text is much longer than the two Religion texts, which together contain less than half the number of words of the Biology text. The Religion texts are taken from a post-primary school textbook, where they exemplify the same topic, appear on consecutive pages and are followed by questions which link them and the topic. The sources acknowledged for these texts are an Irish national newspaper and an autobiography. The Biology text is an extract from the preface of a popular science book, written for the adult general public; this part of the preface is intended to prime the reader on the technical terms of the topic of genetics. The Religion texts are typical of written academic English that pupils encounter in textbooks in the classroom on a day-to-day basis. In contrast, the Biology teacher was experimenting with her choice of text; she had not given pupils this kind of extract to read before, although she sometimes reads aloud from this book in the classroom. The next two sections offer linguistic analyses of these three texts, to facilitate comparison with each other as well as with the other examples of written academic English collected from the context of this study: examination papers and texts written by the pupils.

The written texts used in intervention 1 in Religion

The Religion written texts are examples of celebrities disclosing their experiences of substance addiction. The first text is in the genre of a newspaper story. The article creates the impression of a story using various references to time: the first sentence refers to what the celebrity said "yesterday", later the article refers to what she does "now", and it ends with what she "is now continuing with". The most used verb tense, characteristic of a chronological narrative, is the past simple, but there are also verbs in the present perfect, past perfect, present simple, present and past progressive tenses as well as present participles used in various ways, infinitives and modal verbs. Despite the narrative features, the text in fact reports on what the celebrity said in an address to a conference on substance misuse. One third of the article consists of direct quotations from this speech, with another 10% made up of paraphrases. The quotations tell the celebrity's personal story, while the commentary in between provides additional information about the celebrity's life using adverbial, participle, and relative clauses and extended noun phrases. Nine of the eleven paragraphs have only one sentence, however all of these one-sentence paragraphs are made up of multiple clauses. Clearly, the English of the text contains a wide range of grammatical structures, mostly combined into complex sentences. The direct quotations have an informal tone, using mostly first person subjects, contractions and colloquialisms; however, apart from the expressions "soul sickness" and "blown away", which are used on their own, the quotations are all presented in full sentences, as is appropriate for a public address. Overall the article has a lexical density of 50%. Considering the thematic progression of the text, according to systemic functional analysis (see p.85), the majority of the Themes refer to the celebrity, either in the first person or the third person, indicating that she is the central figure of the article. The exceptions refer to the significant forces in her story, for example "[t]he alcohol" and "the slimming tablets" until the final one-sentence paragraph, where the focus of the message turns from the celebrity to "[m]any kids" and "suicide and alcohol": the last Themes of the text, in the final dramatic quotation. The text bears some sensationalist features, characteristic of a newspaper article, emphasizing the popularity of the celebrity with phrases like "the member of the famous singing family", and then contrasting this with the "battle" to "overcome" alcoholism and addiction. The article juxtaposes these two aspects, for example "made several

successful albums, became suicidal" in the same sentence. The writer of this article does not criticize the celebrity in any way and appears to be totally in sympathy with her message, which may be considered unusual journalism, however the text represents an authentic example of the genre of newspaper article.

The second Religion text does not obviously embody any clear genre. It is presented in four paragraphs: three have four or five sentences and the final one has only one sentence. The first paragraph resembles the recount genre of schooling (Schleppegrell 2004, pp.85-88). It tells the celebrity's story using mostly third person past simple verb forms. The final sentence departs from the simple pattern of the preceding one-clause sentences; it contains complex structures, for example a nineteen–word string of four prepositional phrases and a relative clause, as well as the infrequently used expressions: "in the employ of" and "little short of". This contrast in form reflects the contrast in meaning conveyed in this final sentence of the first paragraph, that the celebrity's seemingly successful career concealed turmoil in his private life. With no explanation, the next two paragraphs may be direct quotations from the celebrity's autobiography, indicated by the reference at the bottom of the text, the quotation marks and the fact that they are written in the first person. They may also be quotations from the celebrity "talking at a course on addiction studies by the Addiction Training Institute, Dublin", as added at the bottom of the same page (see appendix 2, p.290). In these paragraphs the celebrity is telling his story, so most of the verbs are in the past simple tense, with some past perfect structures, including a past perfect passive verb. The final paragraph, is one sentence:

He tells of overwhelming despair, 'I hated everything I had become.'

which combines the third person style of the opening paragraph with the first person autobiographical style of the second and third paragraphs, in a dramatically negative ending, which seems incongruent, both in form and meaning. Quotations from the celebrity make up 57% of the text, which has a lexical density of 51%. As in the first text, there is not much thematic progression, with the majority of the Themes referring to the celebrity, throughout the piece. The purpose of this somewhat incoherent text is not made explicit. It could possibly appear on the back cover of the autobiography of the celebrity, or it could possibly be a book review, however, the genre is not obvious. The text is presented on the page inside the same jagged edge

effect border that surrounds the first text, suggesting that the physical context of these texts is torn pieces of paper. This is appropriate for the first text, which might have been torn out of a newspaper, but does not help the reader recognize a genre for the second text, with the added confusion that the photograph of the second celebrity is superimposed on the jagged edge border. As it is difficult to identify any real world genre outside of the classroom to which this text might belong, it cannot be said to be authentic, although two real world sources are given: the celebrity's autobiography and an addiction training institute course talk. The text may have been designed for the textbook.

The written text used in intervention 1 in Biology

There is no doubt about the authenticity of the Biology text, as it is taken directly from a published book *Genome: the autobiography of a species in 23 chapters*. The purpose of the text is also stated explicitly in the source: it is an extract from the part of the preface "intended as a brief primer, a sort of narrative glossary, on the subject of genes and how they work" (Ridley 2004, p.5). The text contains 1,313 words and has an overall lexical density of 49%. It can be found in Ridley 2004, pp.6-9. There are thirteen full paragraphs, with a final two-sentence paragraph which has the purpose of linking this "primer" with the rest of the book. The paragraph structure follows a logical pattern, with the content of each one following on from and building upon what has gone before to develop the following series of explanations:

1. overview of the genome
2. metaphor of the genome as a book
3. size of the genome
4. the genome is a book
5. the genome is not a blueprint
6. the words making up the genome book
7. the genome book can transcribe and translate itself
8. transcription
9. translation
10. making proteins
11. what proteins do

12. mutation

13. exceptions to these rules

The paragraphs vary in length: the shortest is made up of three sentences, taking up four lines and the longest is ten sentences taking up fourteen lines, with the average number of sentences being five or six and the average number of lines being approximately nine. Paragraph two is exceptional in that the sentences are arranged on the page as a list, and follow this pattern:

There are 23 "a"s, called "A"s.

Each "a" contains several thousand "b"s, called "B"s.

Each "b" is made up of "c"s, called "C"s, which . . .

Each "c" is made up of "d"s, called "D"s.

Each "d" is written in "e"s, called "E"s.

The capitalised letters are technical terms from genetics, for example "CHROMOSOMES", and their corresponding lower case letters are a familiar, everyday term from the metaphor of a book, for example "chapters". Presented as a list, these five sentences stand out on the page, offering a tool for understanding genetic terminology with reference to the metaphor of a book. Consistently throughout the text, subject specific terminology is highlighted by being capitalised, which may help the reader who is referring back to this section of the preface as a "narrative glossary" to find the term they need explained. The fifth paragraph is also exceptional in that the entire paragraph, which is of average length for this text, is in parentheses and is introduced by the word "Incidentally". This paragraph adds a conversational and personal aspect to the text and hints at the writer's irritation at a popular but inferior metaphor to his own. Various other cohesive devices are employed to strengthen the connections between the paragraphs, creating one whole text, rather than a succession of loosely connected sections. For example, after the list of paragraph 2, paragraph 3 begins with a large number: "one billion" in a similar way to paragraph 1: "100 trillion (million million)". The metaphor of the genome as a book is a unifying feature throughout the text; the first sentences of paragraphs 2, 3, 4, 6 and 7 all contain the word "book", referring to this metaphor, which is again exploited extensively in paragraph 12. There are signals for the reader, indicating

how the paragraphs build upon what has gone before, for example "Whereas" at the beginning of paragraph 6 introduces the explanation of a difference between books and genomes; "Translation is a little more complicated" at the beginning of paragraph 9, prepares the reader for a more complex concept than what has gone before; and "then" is used to link the content of paragraphs 9 and 10 chronologically. The final, fourteenth paragraph has two sentences. The Theme of the first sentence "That" refers to the entire "primer" text in "That is all you need to know". The second sentence directs the reader on to the main text of the book, for which they are now ready.

Cohesive devices are also used within paragraphs. Grammatical constructions are repeated in consecutive sentences, for example the same conditional form in paragraph 3 "If I read [. . .], it would take [. . .]" followed by "If I wrote [. . .], my text would be [. . .]" aids cohesion as well as emphasizing the point being made. Paragraph 1 contains a similar cohesive device, with one sentence beginning "In principle, . . ." and the next sentence "In practice, . . ." Paragraph 7 contains various adjectives all celebrating the genome: "clever", "ingenious" and "famous". Thus the individual paragraphs each convey their particular message and contain their own specific patterns.

The paragraph and sentence structures are characteristic of explanatory academic writing, reflecting the need to build up information as the text progresses. Many of the technical terms the writer explains are nominalisations, for example: "RECOMBINATION", "REPLICATION" and "TRANSLATION", reflecting the academic context from which they come. The use of grammatical metaphor (see p.85), in these cases the nominal form of a word which is usually used as a verb, enables a writer to then use a verb about that noun, so that they can add further information, to explain it or progress an argument. Ridley uses thematic progression in a similar way. For example, paragraph 12 begins by introducing the concept of mistakes. Sentence 2 gives examples of small scale mistakes and sentence 3 large scale. Sentence 4 then refers to the first three sentences in the one-word demonstrative pronoun Theme "This"

This is known as MUTATION. Many mutations . . .

The term "MUTATION" is introduced in the rheme of sentence 4 and is then used in the Theme of sentence 5, thus making it possible to build up further information about this concept.

Clearly, this text is highly structured and dense with information. While there are conversational features: the aside of paragraph 5, the occasional colloquial word such as "blob" and the occasional short sentence: "So is a genome", the syntax is appropriate for the context of Biology and the purpose of explanation. This is also reflected in the verb forms, which are predominantly present simple tense, some in the passive, but mostly in the active voice. The simplicity of the verb forms fosters clarity and aids comprehension of the complex concepts conveyed through the text.

To conclude, it is clear from this analysis that the three classroom texts display considerable linguistic differences. The Religion texts bear some similarities to each other, but both contrast strongly with the Biology extract, as would be expected in writing from such distinct contexts. The Religion texts appear to be easy to read, with their personal tone created by the high percentage of quotations. Native English speaking pupils might find themselves identifying with the celebrities, who are the subjects of these texts. However, the first text in particular contains a wide range of grammatical structures and would pose a considerable challenge for many EAL pupils. The Biology text requires a high level of concentration from whoever reads it. It is written both to be read as an introduction and to be referred back to on later occasions, as necessary. As such it is dense with information and uses a variety of literary devices to support the meanings conveyed and hold the reader's interest. Lexical density in the form of the number of content words as a percentage of the total number of words, does not show a difference between these texts as their lexical densities are 50%, 51% and 49% respectively. However a striking difference is revealed by thematic analysis, with the Biology text displaying extensive thematic progression and the Religion texts' Themes referring predominantly, to the same person: the celebrity. Interestingly, all three texts end with a short paragraph of fifteen or less words, which is probably not a feature teachers would encourage their pupils to copy in their extended written work.

Pupils' written classwork

Classwork written by the pupil participants during the course of this study shows a range of the levels of academic English that this cohort of transition year pupils can produce. The remainder of this section giving the linguistic findings of this project discusses and analyses these texts: a set of ten pieces of written work generated as part of intervention 1, and a set of fifteen texts written after the research lesson implementing intervention 2 in Religion with green class; and a much fuller set of forty-nine texts written as part of intervention 1 in Biology from both classes. This analysis facilitates comparison of the three types of text: examination rubrics, classroom texts and texts written by pupils, thus providing a multi-faceted description of academic English as it occurs in this specific research context.

Green class pupils' written classwork from Religion

Mind maps/lists around addiction and short written statements of personal opinions

Only 10 of the 24 pupils who attended the Religion research lesson implementing intervention 1 handed in written work afterwards. This lesson involved reading the two classroom texts analysed above in preparation for a whole-class discussion around addiction. Very little time was given at the end of the lesson for pupils to write their personal opinion of why people take drugs; the main focus of the lesson was the discussion. In a previous lesson, the pupils had been encouraged to create a mind map or list of lexical items related to addiction. Four of the ten pupils wrote lists, headed "addiction", of between 6 and 11 items. Four of the ten pupils drew mind maps around "addiction", with between 2 and 9 related items. These eight pupils all wrote between one and four appropriately simple sentences giving their opinion of why people take drugs. These short pieces of writing ranged in lexical density from 39% to 70%, with a total number of words between 10 and 35. The only word that appeared in these sentences, which was also found in the pupil's list or mind map is "drugs". Two of the pupils drew mind maps around "addiction to drugs", with 16 and 21 related items in the mind map, but did not give their opinion

on the subject. The pupils do not appear to have connected the exercise of recording topic-specific lexis in one lesson with the exercise of writing their opinion on the same topic in their next lesson.

Texts on body image

Nine pupils from green class attended the Religion research lesson, implementing intervention 2, on the subject of body image (see pp.175-179). Fifteen pupils from green class handed in written work; thirteen of these texts were entitled "Body image" and two had no title. Four of the pupils who had attended the research lesson implementing intervention 2 did not hand in any written work on body image, so only five of these fifteen texts were written by pupils who had participated in the TACS activity in Religion. The other ten pupils had attended other lessons on the topic of body image. The lexical density of these fifteen texts ranged from 42% to 66% and the total number of words ranged from 30 to 123, with a mean average length of 63 words. Two of the pupils, who had attended the relevant research lesson, began with the TACS sentence "Unrealistic images in the media pressurize people to conform to stereotypes" (see p.175). Most of the texts include the word "pressure", but only two contain "pressurize", one written by a pupil who did not attend the TACS presentation. Half of the texts contain a derivative of "stereotype", but only two have "conform", both of which were written by pupils who did not attend the TACS research lesson. These pupils collocate "conform" with "images" and "stereotypical images" respectively. The term "self esteem" appears in ten of the texts, sometimes used incorrectly as a countable noun. Some pupils also misused "media" confusing the need for the definite article.

The texts display various levels of organization. Only four pupils use more than one paragraph. P41 introduces his second paragraph (of two), with the Theme "This" referring to his first paragraph, indicating how the second paragraph follows from the first. Similarly P42 introduces her final paragraph with "However". The two other pupils used a series of one-sentence paragraphs with little attempt to link the ideas they contain. P54 wrote four one-sentence paragraphs, one of which is from an old-fashioned translation of the Bible, without any explanation or quotation marks. All

the other texts are presented using one paragraph. Generally, these one-paragraph texts lack cohesion. Some appear as a list of distinct ideas in separate sentences, with no linking devices to connect them and little evidence of planning. Instead the impression is of random thoughts following each other in written form. For example three of the (male) pupils, include personal comments indicating that they do not have a body image problem. This lack of structure may reflect the lack of clear instructions or preparation for the writing exercise, for example guidelines about its intended (hypothetical) audience, any particular genre to adopt, a supposed context or purpose for the writing and the related linguistic expectations.

Pupils' written texts from Biology

Written texts were handed in by 49 pupils: 25 from orange class and 24 from green class. These are generally longer texts than were handed in by green class in Religion, with the number of words ranging from 22 to 207 words, averaging 101 words in orange class and from 24 to 182 words, averaging 85 words in green class (compared to the average of 63 words for the body image texts). The texts have an overall mean average length of 93 words. This writing exercise was the culmination of intervention 1 over two research lessons in Biology with each class. The instructions were displayed on a screen while the pupils were writing, and ample class time was allocated for the activity. There was a choice of two questions for the pupils to answer; both questions used the metaphor developed in the classroom text, of the genome as a book, the first asking how the genome is similar to and different from a book, and the second asking how the genome "book" is different from a popular children's book (the Harry Potter series). Both questions offered some scaffolding for the writing, setting out four areas pupils should consider for inclusion in their answer. The second question included the instruction "use your imagination".

Question 1

Altogether, twenty-nine pupils chose question 1: sixteen from orange class and thirteen from green class. All thirteen pupils from green class attempt to answer question 1 in their own words, although P52 includes 34 words copied directly from

the original text at the end of her answer, which contains a total of 118 words. In general the texts from orange class (P1 – P31) display less confusion than those from green class (P32 – P59). Two pupils in green class digress from the question, writing instead about the purpose of a metaphor, using the example of a book for the genome to illustrate their answer; one of these, P34, includes extracts from the original text, in quotation marks, as evidence for her argument. P44's answer contains evidence that she has not understood the question or the metaphor; she refers to Ridley's publication as the "book". Only two pupils from green class and seven from orange class answer the second half of question 1, giving differences between a genome and a book; the other nineteen pupils do not mention differences in their answers. Three pupils from orange class, including an EAL pupil, copy sizable extracts (39, 55 and 82 words) of the original text as their answer, with the native English speakers introducing their answer with a few words of their own. At the other extreme, P20 appears to use her imagination and includes ideas not found in the original text, such as the genome containing numbered pages. P1 also includes information not found in the classroom text used in intervention 2, for example the term "anti-codons". P1 is more convincing than P20, because P1's text displays features of academic English: it is well organized, with four distinct paragraphs, linking devices between sentences and appropriate subject-specific lexis. In contrast, P20's text resembles conversational English, containing everyday words such as "things", "like" as a linking device or filler and redundant repetition.

Generally, the question 1 answers represent a wide diversity of text in terms of engagement with the question, length of answer (between 22 and 195 words), number of paragraphs (between 1 and 4) and other organizational devices, cohesion, relevance and coherence, subject specific lexis, lexical density (between 32% and 58%, with the texts which were copies of parts of the original text falling within that range), formality and presentation. There are a few examples of thematic progression, where concepts introduced in the rheme of one sentence are then referred to, generally using a demonstrative pronoun "[t]his" (P2, P18, P50), or "[t]hese" (P10, P44) in the Theme of the next sentence, thus enabling development of the concept in the rheme of the second sentence. This also appears where the same word is repeated, for example "codons" (P1), "stories" in the rheme and "[e]ach story" in the following Theme (P50). There are some linking devices used: "as" (P19, P34,

P39, P43), "because" (P1, P5, P8, P10, P11, P14, P16, P17, P18, P20, P30, P34, P41, P43, P44, P58), "But overall" (P44), "However" (P9, P10, P42), "just like" (P1, P18, P42, P45, P58), "Similarly" (P1), "so" (P1, P48), "then" (P44), "whereas" (P2, P42, P52) and "while" (P9, P19). Half of the pupils who answered question 1 used relative clauses in their answers (P1, P2, P9, P11, P18, P19, P26, P30, P32, P34, P42, P43, P45, P52, P59). However, the answers tend to lack linguistic sophistication and while they are mostly distinct from conversational English, they do not contain a high level of academic English characteristics.

Question 2

Altogether, twenty-one pupils chose question 2: ten from orange class, including P30, who answered both questions 1 and 2, and eleven from green class. All these pupils attempt to answer question 2 in their own words. Question 2 highlighted more confusion about the metaphor of the book, than question 1. Five of the eleven green class pupils and four of the ten orange class pupils interpreted the genome book as the published book written by Ridley, rather than as a metaphor for the organization of the genome. Two other pupils from orange class wrote rather confused answers containing both interpretations of genome book. Question 2 asks:

> How do you think the genome "book" is different from a Harry Potter book? (use your imagination)

This question was followed by prompts to help pupils select the content of their answer, such as: Who reads the "books"? What is their purpose? How are they made? Clearly the question is not clear enough, as nearly half of the pupils misunderstood what they were expected to write about. Putting this issue aside, the question 2 answers again represent a wide diversity in terms of length of answer (between 16 and 207 words), number of paragraphs (again between 1 and 4) with one pupil, P38, using bullet points to organize his answer, lexical density (between 41% and 61%), cohesion and coherence. P33, from green class, produced an incoherent answer. In contrast, P54's answer follows a logical argument, explaining differences between the genome "book" and a Harry Potter book and concluding with the idea that the genome "book" has more similarities with the Bible. Again, approximately half of the pupils used relative clauses in their writing (P3, P23, P25, P27, P33, P36,

P37, P38, P51) and there was a wider range of linking phrases employed for question 2 than question 1: "although" (P35), "as" (P13, P23, P25, P30, P35), "because" (P3, P27, P35, P37, P46), "Besides that" (P3), "but" (P3, P23, P25, P40, P54), "Firstly" (P55), "for one" (P12), "however" (P12, P54), "so" (P27, P35), "therefore" (P35), "thus" (P35), "To sum up" (P3), "whereas" (P25, P35, P46), "while" (P3, P37, P40, P51, P55), and "whilst" (P37, P54). P35 attempted to incorporate features of academic English: some successfully, for example thematic progression and linking words such as "whereas" and "therefore"; others less successfully; for example the overcomplicating use of the modal verb "would", and inclusion of inappropriate colloquial expressions; and some unsuccessfully, for example an incorrectly formed passive voice verb, and the mis-collocation of "lengthening" with "knowledge". This is similar to P12's answer (see pp.193-195), suggesting that some pupils try to write academic English, but need linguistic support. P3's answer (see p.191) displays her lack of awareness of the distinction between academic and conversational English, as might be expected of an EAL pupil. Other pupils used inappropriately colloquial lexis and other informal features, for example, "&" instead of the word "and" (P51). P46 marked the termination of his answer with "D' end". Presentation is another notable issue, with some of the texts proving quite difficult to read due to illegible handwriting and multiple words having been crossed out. A number of the texts contained grammatical errors, mostly subject verb disagreement, and some displayed somewhat erratic use of upper and lower case for the first letter of nouns.

To summarize, the data collected from the participant pupils in the form of written classwork is very diverse, as described above. The conditions under which the Biology texts were written produced some extended logical writing, organized using linguistic resources such as paragraphing, linking devices, and relative clauses, as well as subject-specific lexis. These conditions also yielded some incoherent writing, answers as a series of unconnected sentences and confusion about the content. The conditions included class time for the activities of reading the classroom text, discussing it in small peer groups and then as a class, and for asking questions about the classroom text and the writing activity questions, before writing. Many of the pupils followed the prompts suggesting areas of content for the writing and used this as the structure of their text, some with no attempt to unify the different parts into a cohesive whole. This may be evidence that these pupils do not receive instruction

about academic English and so are not aware that a valued answer would display cohesion as well as coherence and relevance to the question. Other evidence of a lack of explicit academic English instruction may be found in some pupils' attempts at more ambitious features of academic English, which reveal a lack of knowledge in how to manipulate academic language, for example: mis-collocation and inappropriate or incorrectly executed grammatical structures. Despite the instruction "use your imagination", the answers lacked imaginative approaches, such as choosing an extraordinary genre for their answer, or writing from the perspective of a Harry Potter character; this may indicate that these pupils are not used to planning their written work in terms of identifying the writer, the audience, the purpose for writing and the context. The green class pupils who had collected lexical items associated with addiction in mind maps or lists did not use those items in their writing about addiction, which may indicate that they did not realise that the list/mind map exercise was intended to support their writing as well as their understanding and learning about the subject. This could also be evidence for a lack of explicit academic English development.

Reflection

A striking quality of the texts discussed above is their diversity. The two examination rubrics are different in many ways from each other and the Biology examination contains considerable variety and even discrepancy within itself. The question forms that appear to be deliberately standardized, because they are used repeatedly, are probably not intended to assess English language proficiency. Similarly, the arbitrary question forms that appear incongruous in their context, also have linguistic implications, particularly for EAL candidates. Constructive, helpful standardization of SEC questions, as well as formulation of questions in general, should involve consideration of the challenges posed by the linguistic complexity of the rubric.

The three classroom texts, chosen by the co-researching teachers, also display a striking diversity. They could all be used to linguistic advantage. The first Religion text provides an example of a newspaper article genre and could be exploited by

identifying the differences between what is acceptable in this genre, but would not be acceptable in a Religion class essay, for example. It could also be usefully compared to a different newspaper article that is more critical of a celebrity, to highlight how language can be used to criticize and how to interpret such writing. The second Religion classroom text is an example of a piece of writing that appears to have no genre and therefore no obvious purpose. Pupils could easily improve this text by changing it to fit a genre of their choice and so learn about the various different stages and associated grammatical and lexical features of different genres. A similar exercise could be based on the postcard text from the Religion examination, transforming it into a more authentic instance of the postcard genre. The Biology classroom text could be studied for the linguistic features that enable it to successfully convey complex information in an interesting manner, for example: the planning implied by the logical paragraphing, the cohesive devices, and the development of an appropriate metaphor. This text provides an example of explanatory academic English (of genetics), which is above the level that post-primary pupils would be expected to produce, but from which pupils could learn linguistic patterns, structures and devices, as well as technical terms. Once pupils have read a classroom text for the meaning it conveys, it can then be used for academic English development. Criticising, suggesting improvements or holding a text up as an example can advance pupils' familiarity with and ability to produce academic English.

The diversity in level of academic English features in the pupils' texts discussed above may reflect different pupils' familiarity with the type of writing that is valued at school; those who are more familiar with academic English can perform at a more advanced level than those who are only trying to follow the instructions of the question. While the measure lexical density also indicated diversity in the pupils' writing, it was not found to be very helpful for comparing texts, probably because the texts were generally so short. The pupils' written work suggests that they have not all learned how to produce academic language to the same extent. To rebalance language based educational inequity, then, explicit academic English development should be part of regular subject classes. While the education system remains orientated towards high-stakes examinations, questions should be designed to assess subject knowledge along with its associated language forms, for example the passive voice is

appropriate in a Biology investigation report, but not in a rubric which aims to personalize a question. The relevance of Applied Linguistics to this educational context cannot be overstated. Applied Linguistics can inform examination commissions, textbook writers, teacher education programmes, subject teacher associations, staff rooms and classrooms, all with the purpose of revealing the hidden linguistic curriculum of schooling, addressing the challenges it poses and thus promoting social justice.

Transition year highlights the backwash effect of examinations. The Biology teacher is aware of her own tendency to teach for examinations, which she considers unfortunate but necessary in examination classes:

> but when it comes to Leaving Cert, I, you always have to have your eye on the winning post and you can't, you can't sit back, which is a pity, which is a pity, you know? (Biology teacher, conversation 2)

Transition year in the research site school was not only a break from homework and the pressure of examinations, however, but also appeared to be a break from reading and writing for the pupils. This may be a tendency in all schools offering transition year to a greater or lesser extent. However transition year represents an ideal opportunity for pupils to focus on these language skills: to read extended text in order to become familiar with genres and encounter grammatical structures and lexis in context, as well as to develop writing skills. For example, pupils could apply for their work experience placement using the letter of application genre. Transition year is also an invaluable opportunity for pupils to develop more basic levels of literacy if necessary.

Pupil and teacher attitudes towards classroom interventions

Intervention 1

Intervention 1 is a teaching sequence, involving the language skills: reading, speaking, listening and writing, focusing on academic English at the level of text or genre. The original guidelines for teachers, which I prepared and gave to the two participant co-researching teachers to implement with their own adaptations, were

entitled "Pupils read about and then discuss a challenging topic" (see appendix 3, pp.291-292). This title developed into "Read – small group discussion – whole class feedback – write in pairs" for the revised version of guidelines for transition year classes (see appendix 4, p.293 and p.294 for guidelines including rationale). Another revised version for examination-focused classes is entitled "Read – small group discussion – whole class feedback – write", where the pupils write individually as the final activity (see appendix 4, p.295).

Intervention 1 in Religion with green class

The Religion teacher implemented intervention 1 in green class, with 24 pupils attending. She adhered to the original guidelines, apart from that the whole sequence was fitted into one lesson, rather than being spread over two lessons. The Religion teacher provided two short texts about substance addiction, (see appendix 2, pp.289-290 and pp.153-156) which the pupils read during the first part of the research lesson; she then facilitated an open class discussion, followed by a short period for pupils to write their ideas about why people take drugs. At the end of the class, time was given for pupils to write in their research notebooks. Twenty-one pupils wrote comments: two pupils had already left the class by this stage and one pupil had chosen not to participate in the research.

The Religion teacher sees her style of teaching as similar to the guidelines for intervention 1, but identified class discussion as very difficult to achieve as pupils are used to addressing the teacher, not each other, when they are the only person speaking in the classroom:

> in other classes, they're not meant to be talking across to each other like that, so it's very hard to get the kind of conversation amongst themselves going, like they're fine chatting to each other at the table, but, kind of outwardly debating things that the whole class can hear, I find that a very difficult atmosphere to get going. (Religion teacher, conversation 1)

The Religion teacher would have preferred the pupils to be seated in a circle for the open class discussion, which unfortunately would be awkward in their classroom with 24 pupils and a similar number of tables and chairs arranged in rows, filling the room. However, the Religion teacher and I agreed during our recorded conversation

immediately afterwards, that it was a successful lesson because the pupils engaged well with the topic of substance addiction and contributed examples that they considered personally relevant. Knowing the class' tendency to be quiet, the teacher was pleased by how the pupils responded to humour and "started coming out of themselves", particularly given that I was present as an observer. From my perspective, as an outsider and guest in the classroom, I observed very good rapport between the teacher and the class, with pupils feeling at liberty to express views that challenge the mainstream, mention taboo subjects and feeling able to ask questions, including "What does that mean?" The teacher demonstrated her total engagement in the discussion, linking different pupils' comments and encouraging further development of their ideas (researcher diary notes, 14.12.2011).

Twenty-one pupils wrote comments in their research notebooks. Only one of these pupils, P46, reported that the articles about addiction were difficult to read because of being "long and some of the words are difficult", and P47 seems to have misread the reflection question and answered about articles generally, observing that they can be difficult to read depending on their length. P40 and P53 wrote that the discussion in class did not help them, with P40 elaborating "it covered things I knew before about addiction". Generally however, there was a consensus of opinion among the pupils that the texts about substance addiction were easy to read and that the class discussion was helpful in various ways, including for a native Spanish speaker. This indicates that, rather than writing what they believed I wanted to hear about the class discussion being helpful, the pupils gave their personal opinions, including reasons for their answers.

Intervention 1 in Biology with green class and orange class

The Biology teacher implemented intervention 1 over two lessons four days apart with green class and over two lessons six days apart with orange class, following the same pattern with each class, adapted from the original guidelines. The Biology teacher provided pupils with an extract from the preface of a book about the genome, which gives a summary of basic genetic theory aimed at a non-specialist audience (see appendix 2, pp.287-288 and pp.156-159). She did not think the pupils would

read her chosen text at home, as they are not usually given homework in transition year, so she began each of the first research lessons by explaining the sequence of activities and then giving the pupils time to read the text. Instead of attempting a full class discussion, the Biology teacher adapted the guidelines, and organized small group discussions as the second stage of the teaching sequence. Pupils read the text and then discussed it in groups of 3, 4 or 5 pupils, to decide what they wanted to say about the extract during the feedback activity to the whole class at the end of the lesson, for example that the text was interesting, difficult or helpful. In the second research lesson with each class, the pupils individually wrote one answer to a choice of two questions based on the same extract about the genome. At the end of the second research lesson, time was given for pupils to write in their research notebooks.

The Biology teacher sees her style of teaching as quite different from the guidelines for intervention 1. She said that she tends "to teach from the top of the class", using PowerPoint slides and other means to explain the concepts of Biology. She would not usually give time during a lesson for the pupils to read and she would not usually read to the class from a set textbook. She would sometimes use discussion in her lessons, although she is aware of the pupils' tendency to get carried away and need "to be hauled back on track". The Biology teacher welcomes the challenge of trying out activities such as those suggested in this study, which she would not normally use in the classroom and finds it enlightening about her pupils:

> I'm there to explain the concepts, I think, and it's up to them to read the textbook. But it is good to see how they manage when they are faced with text. I can see some of them glazing over after two sentences. You know, some of them obviously are like that with their textbooks, as well, so, you know, from my point of view, this is actually very, you know, it's, it's very enlightening. (Biology teacher, conversation 2)

One overall aim of Biology classes for transition year (fourth year) in this school is to show the pupils what they will study in fifth and sixth year if they decide to take Biology as a Leaving Certificate subject. The Biology teacher is well aware of the diversity of pupils in the class and that some will not continue with Biology into the senior cycle. However, her enthusiasm for the subject is obvious as well as her sense that her job is to help the pupils gain an understanding of topics such as genetics, while encouraging them to ask questions. She offers advice to "make life easier", such as learning subject-specific terminology, and presents mnemonics, images and

analogies as learning aids for the pupils. For example, one analogy likens amino acids to musical notes in the way that only 20 amino acids combine into billions of different sequences, and only a few musical notes in different combinations create all sorts of different types of music (researcher diary notes, 5.12.2011). Her comments in conversation 2 after implementing intervention 1 demonstrate her thorough knowledge of the individual pupils in the class, her interest in their reactions to the activities and her general enjoyment of teaching:

> I suppose the joy, the pleasure about it is, it's fourth year, so I'm not tied by a syllabus, so I can, it's a luxury that I can indulge in, you know. (Biology teacher, conversation 2)

In Biology for green class, 29 pupils attended the first research lesson and 25 participant pupils attended the second research lesson for intervention 1. 23 pupils from green class wrote comments in their research notebooks at the end of the second research lesson, with two pupils choosing not to write any comments. Asked if 10 minutes spent reading about the genome was a good use of class time, P40 responded "No not really as it didn't really teach anything", three of the pupils expressed reservations: P42 would prefer the extract was read aloud, P50 wrote "I think it was a good use but slower than other methods of learning as there was lots of unneeded info" and P51 found the hand-out with the extract on it confusing. P49, an EAL pupil, responded "Yes [reading was a good use of class time] but i didn't understand a lot". The other 18 pupils wrote positive comments about reading the extract for themselves in class, most of them giving reasons. Sixteen pupils thought that discussing the extract with other pupils helped them write about it, while six disagreed.

In Biology for orange class, 27 pupils attended the first research lesson and 27 pupils attended the second research lesson for intervention 1. 26 pupils from orange class wrote comments in their research notebooks at the end of the second research lesson. Asked if 10 minutes spent reading about the genome was a good use of class time, seventeen pupils responded positively, including P16 who gave the simple explanation "because we got to read", and five pupils thought that it was not a good use of class time, including P3 (an EAL pupil) and P23 both of whom would have preferred the extract to be read aloud in the class. Orange class pupils were asked if they found the genome extract difficult to read. Eighteen orange class pupils thought

the genome text was difficult, with twelve of these specifying reasons involving it containing words they did not understand and three pupils also mentioning the length of the extract, while six said they thought it was not difficult and two said it was a bit difficult. Fourteen pupils thought that discussing the extract with other pupils helped them write about it, while three disagreed and two were ambivalent. Another question for orange class only, asked if the pupils used the vocabulary of genetics in their small group discussions; only thirteen pupils answered this question: six pupils said their group did use the vocabulary and seven said their group did not use the vocabulary during the group activity.

To summarize, there were different reactions to intervention 1 from different pupils, but the overall trend was positive. Almost all of the pupils from green class found the substance addiction texts used in Religion easy to read and found the whole-class discussion helpful. More than three quarters of green class also thought reading the genome text in Biology was a good use of class time while slightly less than three quarters of green class thought talking about the texts with other pupils in groups helped them to write about it, and approximately one quarter thought talking with peers did not help them write their answer to a question based on the text. Orange class was slightly more in favour of intervention 1, with more than three quarters of pupils who commented saying that reading the genome text was a good use of class time and less than one quarter disagreeing. Three times as many of the pupils who commented on the genome text itself thought it was difficult to read, compared to those who thought it was easy to read. Of the pupils of orange class who responded to the reflection question asking if talking about the genome text with other pupils helped them to write about it, nearly five times as many said it did help them, than said it did not help them to write. The Religion teacher found class discussion difficult to achieve but felt the research lesson was successful in getting pupils to engage with the topic and participate in the discussion. The Biology teacher found it very interesting to watch how the different pupils responded to the classroom reading activity and how this reflects the diversity of pupils in the classes.

Pupil questions

At the same time as asking about intervention 1, both classes were asked this wider-reaching question through the pupil research notebooks: "Generally, if you have a question about a school subject, are you more likely to ask your teacher, ask another student, or not ask the question?" Out of thirty-nine pupils who answered this question, twenty-five (64%) answered that they would ask another pupil. Eight of these twenty-five pupils added that they would later ask the teacher if they had not received an adequate answer. Five out of thirty-nine (13%) answered that they would ask the teacher. Five pupils answered that they would not ask the question, and four pupils gave ambivalent answers.

Reflection on intervention 1

The teachers and I, as participant researcher, discussed a revised version of the intervention 1 guidelines for teachers, in recorded conversation 3. This version incorporates some of the teachers' suggestions and adaptations, and was intended to provoke further comments from the teachers as they reflected on intervention 1 together. The Religion teacher agreed that the discussion stage of the sequence of intervention 1 would work better in groups than as an open class discussion, for Religion. She also emphasized the importance of giving the pupils a writing framework to help them structure their written responses in the final stage of the sequence. The Biology teacher expressed grave doubts about whether pupils would use academic English while discussing in groups: "the technical language in genetics, I don't think they're ever going to use unless I specifically ask them to" (Biology teacher, conversation 3) and explained that the way she usually encourages the use of the terminology of genetics is by getting the pupils to give presentations about different genetic disorders to each other. Recommendations about academic English from the teachers included using tasks for which academic English is the most appropriate form of language, such as giving presentations, and explicitly stating that pupils should use this language for such tasks. For writing tasks, the teachers recommended stating explicitly the required content and form of the written text (conversation 3).

Intervention 2

Intervention 2 uses mime to focus on academic English at the level of the sentence. The original guidelines for teachers was entitled "Teacher Acts, Class Speaks (TACS)" (see appendix 5, p.296). The Religion teacher implemented intervention 2 in green class, remaining faithful to the original guidelines. The Biology teacher adapted intervention 2 for orange class. Both research lessons were video recorded and the edited recordings were used in focus discussion groups with pupils, to facilitate video-stimulated recall. Through conversations with the teachers and in view of the reactions of pupils, the revised version of the guidelines for intervention 2 (see appendix 6, p.297) incorporated a change in the aim of the activity, from "to introduce key concepts and associated academic language, by building on each individual student's prior knowledge" to "to reinforce and/or revise academic language (vocabulary and/or sentence structure) associated with the key concepts of a topic". The revised version of the guidelines is entitled "Academic Sentence Charades".

Intervention 2 in Religion with green class

The Religion teacher implemented intervention 2 in green class, with only 9 pupils attending, as many of the pupils were out of school visiting a factory as part of the transition year programme. The Religion teacher adhered to the original guidelines, not speaking for the duration of the miming activity and eliciting the exact prescribed sentence. Her chosen sentence was "Unrealistic images in the media pressurize people to conform to stereotypes". This TACS activity and sentence introduced a lesson about images in the media, following on from a previous lesson on stereotypes of ideal people. The Religion teacher had expressed doubt before the research lesson about whether the pupils would know, and therefore be able to guess, the word "conform". The class did not guess that word, but managed to reproduce the rest of the sentence from the teacher's mime and use of visual aids. The Religion teacher told the class the word "conform" at the end of the TACS activity. The pupils who later attended focus discussion groups about this research lesson confirmed that they

had not known the word "conform" before the research lesson. After the introductory miming activity, the Religion teacher proceeded with her lesson, using the phrase "conform to stereotypes" a number of times and organising the class into small groups to work together on examples of media images, from glossy magazines, which she provided. The lesson was video recorded, so that an edited version could be used in focus discussion groups 1 and 2 with the pupils, to help them recall and express how they were feeling during the lesson. At the end of the class, time was given for pupils to write in their research notebooks. Eight pupils wrote comments; one pupil had chosen not to participate in the research. Five of these pupils subsequently participated in focus discussion groups about intervention 2.

The Religion teacher expressed enthusiasm over the TACS activity after I demonstrated the technique with two sentences, one for Religion and one for Biology during recorded conversation 3. The TACS sentence appropriate for a Religion lesson that I chose for demonstration purposes was: "The ecumenical movement aims to unite different denominations". The two teachers reconstructed this sentence together from my mime, apart from the word "denominations". The Religion teacher remarked about this suggested activity: "You'd have great craic at it . . . Yeah, I think they'd love that, definitely . . . It's the guessing" (Religion teacher, conversation 3). She also demonstrated her understanding of how the TACS sentence should be designed: "Involving the sense or the key word of the lesson, the key concept of the lesson" (Religion teacher, conversation 3). During conversation 4, twelve days after the research lesson, the Religion teacher explained that she had tried out the TACS activity with green class before the research lesson, so that they were familiar with it, and had extended it into a group activity during that earlier lesson (attended by approximately thirty pupils) with pupils miming sentences, about world religions prescribed by her, to each other in groups. The Religion teacher reported that TACS was much "easier" with a small class (the class of 9 pupils, which I observed) than with 30 pupils, because in the larger class it was difficult to identify and acknowledge the pupils who had guessed correctly because so many pupils were shouting out answers at the same time. She also thought it was easier to gain the pupils' attention and that the pupils were more comfortable to shout out their guesses in the smaller class. A significant observation from the Religion teacher was that the pupils would

need to know all the words contained in the TACS sentence for the activity to be achievable:

> if they don't have the, you know, the actual vocabulary to, say that they don't have the vocabulary that's in the sentence, whether you acted it out as best you could, they wouldn't guess, they wouldn't guess that word, because it's not in their vocabulary to start with. (Religion teacher, conversation 4)

Because of this, the Religion teacher felt that sentences to be mimed both in TACS and group activities should contain words the pupils are familiar with, or have met before in the context of the topic being studied at the time. Rather than using TACS to introduce language or a new subject area, she recommended miming in groups as a way to encourage pupils to interact with each other and engage with the subject:

> end of topic erm, activities, or, yeah, I suppose, or reinforcement, revision and reinforcement, really, of what you've done. I think that would be a good idea. Because it's a nice activity, even near the end of a class, to have fun, and even weaker students can just shout up some of the things like and engage. It's getting them to process, like (Religion teacher, conversation 4)

Eight pupils responded to some or all of the reflection questions in their research notebooks at the end of the lesson. Asked if they could remember the sentence the teacher mimed at the beginning of the lesson, "Unrealistic images in the media pressurize people to conform to stereotypes", five pupils reproduced the exact sentence or a very similar version, (allowing spelling errors), two pupils produced grammatically inaccurate versions attempting to capture the meaning of the original, one of which did not contain the word 'conform', and one pupil could not remember half of the sentence. Four pupils wrote that they do not write sentences like the TACS sentence. Of these four, two responded that they would not like to write sentences like this; P45 added that they are too difficult and his sentences are a lot simpler, and P44 stated that her sentences "would be clearer and not using big words". P42 wrote that she would try to write like this in an examination and the other three pupils stated that they did not really write like that. Five of the eight participant pupils who attended this research lesson also took part in focus discussion groups: three pupils made up focus group 1 and two pupils made up focus group 2.

P39, P52 and P59 are the pupils who attended focus group 1. A significant observation from focus group 1 is that the pupils still did not know what "conform" meant after the research lesson; P59 asked "What does conform mean?" during the

focus group and the other two pupils in the focus group agreed that they did not know what "conform" meant either. After watching parts of the research lesson again on the video recording P52 suggested "trying to be like them" as a meaning for "conform" [to stereotypes]. After discussing alternatives such as "follow" or "copy" which featured on the video, P39 and P59 expressed that they would now understand "conform" if they met it in a text they were reading, but they doubted whether they would use it in their own writing. P39 and P59 also said that they would not use the word "pressurize". P59 wanted clarification of "writing academic English", asking "Is that like using big words or different words, or . . ?" Other comments about the TACS activity in Religion include multiple references to the activity making the pupils "listen", which is interesting, as the teacher was silent. The perception of focus group 1 was that everyone in the research lesson was paying attention to the teacher miming, because it was an unusual classroom activity, although P39 said that when other pupils were engaging with TACS she felt inclined to observe rather than to make the effort to participate and have her say:

> P39: when you're doing the mime, do you know, it's like the whole class, like, you might not have any input or say, if like everyone's saying, do you know, you don't really think for yourself, because you can like be like, oh, someone else will say the answer, so I don't have to say anything

P52 was relatively quiet during the focus discussion group, but reacted positively towards TACS. Referring to the teacher staying silent, she said:

> P52: I think she kind of got like a lot more out of us, like proper words and stuff, out of us, than like a conversation or something

P52's final remarks in the focus group were in favour of using TACS; in response to a question asking whether the pupils thought the miming activity was appropriate, she said:

> P52: It kind of made you understand it more as well, 'cause like I didn't know what "conform" meaned, so it kind of made everyone understand it better than when they just talk about it
>
> R: Yeah, there's that, on the one side, but you also said that it took a lot of time. Do you think it's worth the time?
>
> P52: Yeah

Other positive comments from focus group 1 about the TACS activity included that if you were the person who guessed a word correctly, you would remember that word.

P42 and P45 are the pupils who made up focus group 2. P42 explicitly stated that she did not know the word "conform" before the lesson, however she seemed to simply accept it as a collocation with "stereotypes". P45 implied that he did not know "conform" before the research lesson and would still be unlikely to use it, despite attending the lesson. P45 enjoyed the TACS activity primarily for its novelty value,

> P45: It's a change, 'cause it's like boring doing the same stuff over and over and over again, but like, that was different.

P45 also found the TACS activity engaging, "Miming is a lot more fun, because you get to kind of guess". P42 expressed reservations over the amount of class time taken up by TACS, but found it effective as a memory aid: "miming is good because it sticks with you, like that stuck with me, that sentence". The edited video of the research lesson showed some open class feedback, when one pupil read out a list compiled by their group to the rest of the class; comparing this with the "Class Speaks" aspect of TACS, both P42 and P45 said they preferred the "shouting out" of TACS:

> P42: Yeah. Rather than just kind of like focusing on one person talking, rather just kind of shouting out, where everyone gets a say

> P45: Yeah, everyone gets a say like if you shout it out

P42 also said that it did not matter if the teacher did not hear you because of the noise generated by other pupils also shouting out at the same time; she said that you could say your suggestion again.

During conversation 4 with the Religion teacher, I mentioned that some pupils had expressed concern over how long the TACS activity had taken. The Religion teacher did not think the activity had taken a lot of class time:

> I actually don't think that took as much time as they think it did. I think we were just slower starting the class. Like I really don't think they went over six minutes doing that (Religion teacher, conversation 4)

The Religion teacher had expected the TACS activity to take up to 15 minutes of the research lesson.

Intervention 2 in Biology with orange class

The Biology teacher implemented intervention 2 in orange class, with a class of twenty-eight pupils. She adhered faithfully to the Charades aspects of the TACS activity, not speaking for the duration of the miming activity and eliciting the exact prescribed sentence. However, the Biology teacher did not use TACS as an introductory activity, but rather used it to revise vocabulary and concepts of the topic genetics. She had prepared multiple sentences for miming from the front of the class. Her first chosen sentence was "A mutation is a change in the structure of DNA". The class did not guess "structure", but managed to reproduce the rest of the sentence from her mime and use of visual aids. The Biology teacher told the class the word "structure" once it was clear that they were unlikely to guess it, but wanted to know what it was. This interest in revealing the word had been heightened by the Biology teacher miming striking a pupil in the front row; the pupil was looking away from the teacher and was unaware of this mimed action. This humorous moment caught the pupils' attention. (The Biology teacher's rationale was to elicit "strike", which could then be transformed to "struck", which sounds like the first syllable of "structure"). Other sentences, which the Biology teacher mimed for the class, included "The phenotype is the physical expression of the genotype", "People with blue eyes have two recessive alleles" and "Tongue rolling is a dominant allele". The lesson was video recorded, so that an edited version could be used in focus discussion groups 3, 4, 5 and 6, with the pupils, to help them recall and express how they were feeling during the lesson. At the end of the class, time was given for pupils to write in their research notebooks. Twenty-four pupils wrote comments. Nineteen pupils from orange class, who had attended this research lesson subsequently participated in these four different focus discussion groups about intervention 2.

During recorded conversation 3, the sentence I used from Biology to introduce intervention 2 and demonstrate TACS to the two co-researching teachers was: "The protein prion can suddenly change shape", taken from the context of the study of genetics. The two teachers reconstructed this sentence together from my mime, apart from the word "prion", which is outside the range of subject-specific vocabulary that the Biology teacher was expecting, although she knew the word. The Biology teacher reacted positively to the suggestion of TACS: "Well, I think the idea of doing the

mime is actually good . . . They'd actually enjoy it" (Biology teacher, conversation 3). She could also see the value of it from a linguistic perspective:

> And I think it would get them to focus on the words in a way that maybe other things won't, you know? (Biology teacher, conversation 3)

However, she also foresaw the potential for the pupils to not engage, especially in a big class, and she suggested the adaptation of splitting the class into two and introducing an aspect of competition. She welcomed the possibility of the activity being noisy: "With that class, if they get a bit of noise, 'twould be great, you know". In fact, both teachers expressed concern that the pupils might go silent, especially knowing that the lesson was being video-recorded, and suggested that they try out miming activities with the classes before the research lessons.

> So, if they're already used to doing this and had fun with it, then they probably wouldn't even notice the video. (Biology teacher, conversation 3)

On the day of the Biology research lesson with twenty-eight pupils from orange class, the Biology teacher's misgivings proved to be well founded; a lot of the class did not engage with the activity. The Biology teacher had not followed up on her idea of making the activity competitive between pupils, to motivate them, instead adhering to the original idea of intervention 2, TACS, that the teacher acts at the front of the class and the pupils speak whenever they think of a suggestion. However, during conversation 5, the Biology teacher said she thought the miming activity would work better with the pupils in small groups. She related an instance, which had happened not long before, when a fifth year class were working in small groups, and she spontaneously used mime to help one group who were trying to remember a word:

> Yeah, I mean, that's how it worked in the fifth year situation, because they were already in groups and it was just one particular group rooting for a word. They wanted the word, they didn't want me to tell them, I mimed it and it worked. So, as a strategy, it's good. Something maybe that I could build in more. As a strategy even for the fourth year group, though, at least it did get some of them talking. (Biology teacher, conversation 5)

Twenty-four pupils responded to some or all of the reflection questions in their research notebooks at the end of the lesson. Asked if they could remember the first sentence mimed by the Biology teacher at the beginning of the lesson, "A mutation is a change in the structure of DNA", twelve pupils reproduced the exact sentence or a very similar version, (allowing interchangeable definite and indefinite articles), eleven pupils wrote that they could not remember the sentence, and one pupil could

only remember half of the sentence. The only pupil who reproduced other sentences mimed by the teacher, voluntarily in her research notebook, was P3, an EAL pupil (see pupil snapshots, p.191). Twelve pupils wrote that they do not write sentences like the TACS sentence. Of these twelve, three responded that they would not write sentences like this; P21 (an EAL pupil) added "because the words are too complicated" and eight pupils wrote that they would like to write sentences like this.

Five pupils from orange class attended focus group 3 on 26.3.2012: P3, P8, P13, P21 and P31. P3 is a native-speaker of German and P21 and P31 are native-speakers of Spanish. These three pupils were attending the school for one year; they had not moved to Ireland with their families indefinitely. P21 indicated that she had not known the word "mutation" before the research lesson, while the other focus group participants had known it. Having watched the video recording of TACS, P3 remembered not reverting to German during the activity:

> P3: I just thought that it's easier for the others, 'cause like they know the different words than and they can guess better, so, but I, er, yeah. No, I didn't really think that in German.

P21 found the TACS activity more challenging than P3, but she still said she did not revert to thinking in Spanish, even though she did not understand the English words. P31 could not remember what language he was thinking in during the TACS activity in the focus group, however, he had written in his research notebook in response to a handwritten individual question: "Did the miming activity help you at all?" "Yes. It is a different way to learn and it is easier to understand". In general, focus group 3 was rather reticent, apart from P3 who was more willing to volunteer opinions and ask questions. They did not find helpful the lines representing the words of the TACS sentences, which the Biology teacher had drawn on the whiteboard. P3 thought that doing the miming activity in small groups of pupils, instead of TACS, would take too long if only four pupils were guessing together. P3 said that she prefers it when the whole class is listening to the teacher to working in small groups and stated that you can still have your say, or say what you want to say in the class. P21 and P31 both expressed that in a pair work situation, while they speak more, they do not necessarily learn more. Asked about her attitude to academic English in general, P8 said she might feel "nervous, in case it didn't make sense" if she used the wrong academic word. P13 did not really express any personal opinions during the

focus group; he tended to agree with whatever the previous pupil had said. Generally, the pupils of focus group 3 did not find TACS very helpful. P21 said "It was funny". P31 said that he learned the sentence, even though he could not remember it at the end of the lesson to write into his research notebook. P3 said that she learned some sentences, but implied that this should not have taken an entire lesson. Disinclination towards Biology might be a factor influencing this group's lack of enthusiasm about the research lesson; during the practice question P8, P21 and P31 said their least favourite subject was Biology, P13 said his second least favourite was Biology and P3 said Biology was closer to her favourite than not.

Four pupils from orange class attended focus group 4 on 27.3.2012: P10, P11, P22 and P26. All these pupils knew "mutation" as a word from Biology before the research lesson, although they said that they might associate it more readily with X-Men (superheros from popular film). The pupils of focus group 4 had found the lines representing the words of the TACS sentences, which the Biology teacher had drawn on the whiteboard quite helpful. Referring to these lines, P11 showed some linguistic awareness at the level of the sentence: "Well, like you know how many words there's going to be and the kind of structure of it, so it helped". P26 explained that he would not want to volunteer to write the words of the TACS sentence onto the lines on the whiteboard as they were guessed: "No, because you can't really observe it like, if you're looking at it, you can like, go along with it". These pupils accepted the noise levels likely to be generated by a miming and guessing activity performed in small groups, "Unless it gets really noisy like . . . Like, shouting and screaming and stuff" (P10). Discussing the possibility of a Charades-like activity in small groups, P11, who had engaged with the TACS activity and was the pupil who guessed "DNA" showed her recognition that not all of the class had been engaged in the activity during the research lesson:

> P11: More people might be able to get involved that way
>
> R: Thank you, yeah. Did you feel that a lot of people weren't involved?
>
> P11: Well, like, they're just coming, sitting and watching"

P22 recognised the value of TACS for memorisation:

> P22: It kind of helps you remember it though. Because, if you think about, like, what actions she did and you put them on the board.

However, generally, the pupils of focus group 4 did not feel they had learned very much during the research lesson implementing intervention 2.

Six pupils from orange class attended focus group 5 on 29.3.2012: P1, P2, P6, P9, P24 and P25. This group was quite animated and appeared to be enjoying the focus group discussion. They all knew the word "mutation" before the research lesson, and P1 said she would consider it a Biology word, while P25 said "It sounds like a Biology word, so it probably would be a Biology word". The pupils engaged in some light-hearted banter around the word "mutation", suggesting: "dangerous" (P24), "weird" (P24), "bad" (P6), "something that's not meant to happen, something bad" (P2) and "unexpected change" (P6) in their interpretations. However, P1 said she felt neutral about the word "mutation". Concerning the lines representing the words of the TACS sentence, which the Biology teacher had drawn on the whiteboard, P1 and P6 did not find them particularly helpful and did not really look at them during the activity. P9 found them helpful "to just count along, keep track of what they were actually doing", because she said "Yeah, honestly, I didn't have a clue what was going on. There was too many things like being acted out". The other pupils in the focus group found the lines on the whiteboard helpful for the sentence structure they provided, allowing them to guess non-content-bearing words:

> P25: It helped because then you could like, count along the words that you had gotten and you could fill in the gaps along the way.

> P2: Like, the little words like, 'cause you would fill in, like, kind of "the" was like easy.

Focus group 5 had a lively discussion about whether the miming activity would be better done in small groups of pupils, with some quite strongly opposing opinions expressed. P6 and P24 argued against TACS as implemented in the research lesson:

> P6: Yeah, because, well like, when it was with the teacher, there was only like two or three people actually saying anything. The rest of us were just asleep.

> P24: There was nobody involved, like, it was all directed at, like, [the name of an orange class pupil, who engaged with the TACS activity in the research lesson]

P1 argued in favour of a similar miming activity performed in groups of pupils:

P1: I think it would be better in groups, because the people who aren't going to work in groups, they wouldn't work when it's not in a group either, so it doesn't really make any difference. If people are in groups, then some people might work better like that, because they are with their friends.

However, P2, P9 and P25 argued against a miming activity in small groups:

P6: And then, if it was in groups, it would be your friends doing it as well, so you'd be more interested and then there's less of you as well, so you'd have to like concentrate more

P2: Yeah, but you wouldn't get it done, because like, you'd be messing

P24: Yeah

P25: Yeah

P9: Everyone would be talking, everyone would just be talking, or people wouldn't even do it like. Some people just sit there

P25: And they'd expect like a leader of the group to do it and it would come down to them and they'd only do the work, and no one else would, so it's easier with the teacher, 'cause it gets everyone involved.

There were mixed feelings among the pupils of focus group 5 about the research lesson, ranging from "I didn't learn anything" (P6) to acknowledging its value for revision purposes. However, the general consensus was that the TACS activity took a lot of time to cover only a few sentences.

Four pupils from orange class attended focus group 6 on 30.3.2012: P12, P15, P27 and P30. Near the beginning of the focus discussion group, P27 asked "What does "mutation" mean?" even though the TACS sentence "A mutation is a change in the structure of DNA" was on display on a card on the table in front of her. The other pupils suggested answers involving Teenage Mutant Ninja Turtles and X-Men, although they also mentioned that they had met the term in class. P15 and P30 were strongly against the TACS activity as implemented in the research lesson from the beginning of the discussion group. P12 and P27 agreed with P15 and P30 that the lesson did not really help them, although they liked the novelty of doing something different; P12 and P27 had been amongst the most active participants in the TACS activity. P12 and P27 said they used the lines representing the words of the TACS sentence, which the Biology teacher had drawn on the whiteboard, to engage with the activity:

P12: They kind of kept us on track

P27: We could like, put the words in, like point, like, we were pointing at the board, while we were doing the words. It helped, instead of having to go (mimes counting on her fingers) with your fingers.

In contrast, P30 was indifferent about the lines and P15 said "I didn't even notice it". The focus discussion group became a little bit more animated at the suggestion of doing the miming activity in small groups of pupils. P30 thought this would improve pupil engagement: "Yes, because you're going to have to do it like" and P12 and P27 thought it would be fairer as it would make it easier for all the pupils to suggest guesses, while relieving the few pupils (such as themselves) who were willing to shout out guesses in a full class situation.

P27: In groups everyone would get a chance to speak, I think

P12: Somebody else would do it.

P15 expressed that he would not be comfortable with the noise levels that would be generated by six groups of pupils simultaneously doing a Charades-like activity: "Everyone would be shouting, it would be too loud". P27 agreed that miming and guessing in small groups would get loud. In view of this, the group discussed the role of the teacher: being able to control the class, interacting with the different groups during group work as well as the importance of being able to hear the teacher. The pupils of focus group 6 developed the idea of a Charades-like group activity and agreed with P27's suggestion of how this could be staged:

P27: I think if you start in the big group, so people get comfortable like with the game and stuff and then move on to being in smaller groups.

However, P15 returned to his initial response "No, it's a waste of time" and P30 said, "Er, I'd say it's not worth doing it really like". P27 thought that guessing from mime was "good to get your brain working" and suggested having it as a classroom activity "every now and again". P15 agreed, saying "it's good to have a bit of change". In conclusion, focus discussion group 6 reflected the general feeling of the four focus groups made up of pupils from orange class, that the research lesson implementing intervention 2 in Biology had not been very helpful.

To summarize, intervention 2 was implemented in quite different ways: by the Religion teacher using TACS as an introductory activity with green class, with only nine pupils present, and by the Biology teacher using TACS repeatedly with multiple sentences throughout the research lesson as a revision exercise with a full class. Pupils from green class were more positive about the Religion research lesson than pupils from orange class were about the Biology lesson. Criticisms from pupils about the Biology research lesson included that not enough work was covered and only a few pupils engaged with the TACS activity. The main criticism from pupils about the Religion lesson was that the TACS activity took a lot of time, although the Religion teacher said she thought it had taken a maximum of six minutes and that she had expected it to take longer. As well as this, pupils were not confident that they understood the meaning of the TACS sentence, and particularly the new word "conform", after the research lesson. Some pupils recognised that the guessing exercise involved linguistic processing, and some saw it as helpful for memorisation. Half of the pupils who wrote in their research notebooks from both classes reproduced the exact or very similar TACS sentence at the end of the research lesson (the first sentence, in the case of the Biology lesson). Half of the pupils also answered that they do not write academic English sentences like the TACS sentences. Some pupils enjoyed the TACS activity, even if only because it was something different from the usual classroom routines. Most focus group participants, as well as the teachers, thought that a similar miming activity performed by pupils in groups would increase pupil engagement.

Reflection on intervention 2

The teachers and I, as participant researcher, discussed intervention 2 together in recorded conversation 6. The teachers explained to each other how they had implemented TACS in their respective research lessons; the Religion teacher had started with the TACS activity to introduce the lesson,

> And I wrote it up, the sentence up on the board and we just carried on then doing kind of activities to reinforce the sentence and then I just kept kind of going back to the language in the sentence. (Religion teacher, conversation 6)

The Biology teacher explained that she had used TACS repeatedly throughout a revision lesson:

> Well, we did a number of sentences, I can't remember how many we did, but erm, we did, they were definitions, basically, sentences defining certain terms they had learned or were supposed to have learned. (Biology teacher, conversation 6)

The Biology teacher reported

> And it worked ok, it worked along reasonably quickly, quicker than I thought actually . . . but only about half of them took part, of this, the girls rather than the boys. (Biology teacher, conversation 6)

Both teachers also related for each other how they had used mime on other occasions: the Biology teacher, spontaneously, with a group of fifth years who were trying to recall a subject-specific term, and the Religion teacher with green class to familiarize them with miming in the classroom before the research lesson. I produced a revised version of the intervention 2 guidelines for teachers, in recorded conversation 6, intended to provoke further comments from the teachers as they reflected on intervention 2 together. These revised guidelines outline a procedure similar to that followed by the Religion teacher during her practice lesson, for which I was not present, but the Religion teacher reported:

> they loved it, they were better in that way, I think, for shouting up, like I had only seven or eight the day we did it, and they were grand because they were, there wasn't much, you know, they weren't really shy, but in small groups they were better. (Religion teacher, conversation 6)

and the Biology teacher responded: "That's a good idea . . . That would be better, in this group particularly, because they are particularly quiet". The teachers were both glad to have tried the miming activity in their classrooms and saw potential in using mime in their classes in the future. The Religion teacher emphasized again the importance of the pupils knowing the language in the sentences to be mimed, unlike the word "conform" in her TACS sentence, which none of the pupils knew before the research lesson. Reservations about using mime in small groups included the potential problem that not all pupils would be willing to mime in front of a group of four or five classmates. The Biology teacher said, "as long as the groups had one person in who was prepared to do the miming" and the Religion teacher agreed:

> I did find that time I did it in all the individual groups, not all of them are willing to mime. Some of the people had to do it twice. You know, that kind of thing, so it's again, their own comfort, how comfortable they are with this kind of

putting themselves out there, even in a group of four or five people (Religion teacher, conversation 6)

with the Biology teacher adding, " . . . and some of them are just lazy too", which is similar to comments made by some of the pupils in focus discussion groups. The teachers also commented that pupils who knew the game Charades were at an advantage and some of those who were not familiar with it were unable to respond to the activity.

Intervention 3

Intervention 3 is a problem solving activity during which pupils explicitly discuss, with each other, solutions to challenges arising from academic English use at school. Unfortunately the teachers did not think it was possible to implement this intervention in classes with the participating pupils near the end of the school year, because the pupils were very busy with all sorts of other school activities. However, the teachers and I discussed the proposed initial guidelines for intervention 3, entitled "Explicit focus on language – problem solving discussion" (see appendix 7, pp.298-299) during conversation 6.

The Biology teacher explained that her teaching often involves indicating differences between words and she encourages pupils to make up ways of remembering such differences, to:

> think of something to hang it on and they usually do, you know? I mean like, NAD and NADP: NAD is in respiration and NADP is in photosynthesis, so like you say, ok a 'P' is for photosynthesis. (Biology teacher, conversation 6)

When a pupil suggests a good idea about how to remember something, the Biology teacher would share it with the rest of the class.

> And then, it would be good, well, like, I haven't done it in a formal setting like this, but I have asked them, 'Ok, has anybody any way of distinguishing between those, and it might be a mnemonic, it might be just a picture association or something with the word, it's usually some way, somebody might have come up with something already, but I'd have heard most of them before, but I usually, so I'm inclined to step in and give them one, because, you know? (Biology teacher, conversation 6)

The formal aspect of intervention 3 is the procedure of putting pupils into pairs, then combining these pairs to make groups of four or six, and then forming new groups made from one member of each of the previous groups. This means each pupil addresses the challenging linguistic item three times. The first time is with one other pupil to engage with the challenge and attempt to come up with a solution. The second stage is when the pairs of pupils combine to make groups, who share what they have come up with and agree on the best solution from their suggestions; at this stage pupils are still with their original partner and so can continue to develop their idea. However, by the end of this stage with the first groups (of four or six pupils) all the pupils need to know their group's chosen best solution because they go on to a new group made up of pupils each from different groups, so that they are the only pupil who knows their original group's best solution. Creating this "formal setting" for an activity the Biology teacher already includes casually in her teaching would involve dedicating more class time to it and asking all the pupils to engage with the challenge. This would be a movement away from the Biology teacher's style of teaching from the front, towards affording the pupils the opportunity to learn about learning from each other, as well as hearing multiple suggestions of solutions from their peers and enabling them to choose for themselves the strategy or strategies that might work best for them. The formal activity supports examination preparation:

> there's quite a popular question in Biology, where they say "Distinguish between the following pairs of terms", so they might have "homozygous" and "heterozygous", "carpal", "car…" (Biology teacher, conversation 6)

The Religion teacher also thought that the problem solving discussion of intervention 3 would be appropriate for classes preparing for examinations and was generally positive about the proposed classroom activity:

> that is good if it was like at the end of a topic, or something like that, or in the middle of it, that some phrases came up that were difficult. I do think it would work. (Religion teacher, conversation 6)

The Religion teacher also demonstrated that she was familiar with the technique for grouping pupils that is given with the guidelines for intervention 3.

Pupil snapshots

P3 – an exceptional EAL pupil

P3 is a female pupil in orange class, who speaks German as her mother tongue. She came to Ireland for one year to attend transition year and improve her English. She wrote a relatively long answer in English about the genome (184 words) with a relatively low lexical density (43%). This written work includes a mixture of conversational language such as "loads of" and "way more detail" and academic language such as "many" and "To sum up" in the same text. This inconsistency indicates that P3 is not aware of these differences between conversational and academic English and so not in a position to choose language appropriate for this school-based task. P3 participated in two focus discussion groups: group 3 from orange class after the Biology intervention 2 research lesson, and group 7, which was made up exclusively of EAL pupils, at the end of the project. P3's research notebook response to the reflection question about asking questions to the teacher or other pupils (see p.174) exemplifies her general attitude:

> P3: In generall I have no problem with asking the teacher 'cause it's better than not understanding. If it's just a small thing I ask another student. I think it's weird that no one askes questions though I'm sure not everyone understands.

In response to the reflection question asking if she would like to write sentences like the TACS sentence, P3 wrote "I would like to 'cause it's way shorter than explaining it in long sentences", which suggests a good perception of the essence of academic English. P3 is the only one of the EAL pupils who mentions a degeneration of her mother tongue while she has been in Ireland:

> P3: Yeah, sometimes it's erm, yeah, I'm writing about once a month, erm, an email to my family and friends, and sometimes I really have a problem to get the words into the right order and just like . . .

P3 appears to be unusually confident and willing to participate in school, and the research project, and has a keen awareness of language issues.

P9 - functioning in the school context does not necessarily involve understanding

P9 is a female pupil in orange class, who speaks English as her mother tongue. She wrote a relatively short answer about the genome (76 words) with a high lexical density (58%) at the end of the research lesson implementing intervention 2. She participated in focus discussion group 5. The following exchange is from P9's research notebook:

> Printed reflection question: Do **you** ever write sentences like that? (for example in school or in an exam)
>
> P9: I don't usually write sentences like that but only because this is a new topic and we haven't had a chance to, but I would write like that or very similar because I learn things directly from a page rather than understanding them/putting them in my own words.
>
> Handwritten response from the researcher: That's very interesting. So do you never want to ask what a word means?
>
> P9: No, usually I just learn but I don't give much thought to understanding it as long as I CAN ANSWER THE QUESTION IN A TEST (upper case in the original)
>
> Handwritten response from the researcher (written at the same time as the previous one above): Do you think of the things you learn at school as separate or connected to the rest of your life?
>
> P9: Separate

P9 appears to be satisfied with rote learning school material, which she sees as personally irrelevant, as a means of functioning in the school context. She implied in focus group 5 that she expects school to provide a high quality of teaching, as she was dissatisfied with the Biology TACS lesson which, she said, only covered three sentences in an entire lesson. TACS may not have suited P9's style of learning as she attempted to reproduce the first Biology TACS sentence at the end of the research lesson, but could only remember the first half of it. Understanding does not appear to be a priority in P9's conception of learning; in focus group 5 she said:

> P9: I'm not even sure what academic English is, like, I just take phrases from teachers and put them into answers. I don't have a clue what I'm writing

P9 found the genome text difficult to read, because there was "too much information" and she felt herself "tuning out"; she did not think she learned anything from reading it. However, she wrote:

> P9: Our group talked about some of the longer words but didn't understand and couldn't pronounce some of them, although talking about it did help.

She also wrote, "I felt writing helped understand", indicating that she does value understanding even if she does not see it as a necessity for succeeding at school.

P12 – extraordinarily willing but ill equipped to produce written academic English

P12 is a female pupil in orange class, who speaks English as her mother tongue. She wrote a relatively long answer about the genome (167 words) with a lexical density of 53% at the end of the research lesson implementing intervention 2. P12 is a willing and active pupil, for example she participated actively in the TACS activity in Biology class and volunteered to perform the short dramatic sketch at the end of the initial information session to the transition year cohort (see pp.273-274 and pp.277-278). P12 was involved in the lively discussion of focus group 6 (see pp.185-186) including multiple extended contributions, such as:

> P12: Like, there's a tendency, like, if they go into groups, about two minutes later, we can go off the subject, because the teacher's not supervising us, we just go off and talk about what we're doing and stay off the, like we were told to go and do trays or something, after about two minutes we'd probably stop and do something else

These contributions to the focus group discussion display competence in using lexis appropriate to an academic discussion, and not usually found in teenage conversational English, for example: "tendency", "supervising", "uneven distributions". However, in written contributions, in her pupil research notebook, P12's attempts to produce written academic English are less successful:

> P12: I think the time used to read about the genome may have been used to do something slightly more beneficial to our academic curriculam.

Here in a complicated passive construction P12 chooses "may" for her modal auxiliary verb, where "could" is appropriate; this could possibly be because she believes "may" is more "polite" or "academic". She also mis-collocates "beneficial" with "curriculum", unfortunately creating the opposite of the erudite effect she probably intends.

> P12: I thought that parts of the extract were easily understandable whereas if any scientific terms were introduced it would become exceedingly more difficult to make sense of.

The grammar of the parts of this sentence reflects the meaning conveyed in them, although I doubt this was P12's intention. The first part describing clarity, is clear itself and successfully uses the grammatical metaphor "understandable", an adjective derived from a verb, which is appropriately modified by the adverb "easily". The conjunction "whereas" signals that a contrast is to follow in the second part of the sentence. However, this is confused by "if" which would be expected to signal a conditional construction, but is actually followed by "were introduced" which resembles a passive form. The hanging preposition, "of", further complicates the sentence, with the over-cultured "exceedingly" creating an unintended and unfortunate comic effect. P12's attempt at using academic lexis and grammatical constructions fails because she does not know how to do this and has not had practice producing successful academic English.

In her written answer about the genome, P12 uses the term "genome 'book'" to refer to the actual book which contains the extract given to the Biology class pupils to read as part of intervention 2. This reveals P12's misunderstanding of the question and probably also of the metaphor used in this extract, which describes the genome as a book (Ridley 2004, p.6). Even allowing for this misunderstanding, P12's answer is confusing for the reader because of unsuccessful attempts to use academic English in her writing. She uses five paragraphs, but the paragraph structure has little obvious logic; for example the first sentence of paragraph 3 follows on from the last sentence of paragraph 2, with the ideas expressed being more closely associated with each other than to those expressed internally within the two paragraphs. Similarly, the sentence structure does not reflect the structure of her argument; for example the first sentence, which is also the first paragraph, contains three different ideas. P12 attempts to use conjunctions in a manner appropriate to academic text. She uses "however" and "somewhat" successfully. Unfortunately some of her attempts are less successful, detracting from the cohesion and coherence of the text, and leading the reader to expect different information from what is given. For example, "infact" is used to introduce an idea at the end of the first sentence, which bears little relation to what has gone before, and "For instance" is used to introduce an idea in a new sentence, which is not an example of what was expressed in the previous sentence. Like P3 (see p.191), P12 mixes conversational lexis with academic English, for

example: "for one" to introduce one of her arguments, and the colloquial expression, commonly used in Munster, "that small bit easier". She is aware of academic lexis, but lacks the competence to use it successfully; for example, she does not know patterns such as that "differ" is followed by "from" and to use the indefinite article, not the definite article, in "take an interest in". P12 is extraordinary in her willingness to attempt to produce academic English and it is unfortunate that her efforts are often unsuccessful.

P30 – school is a waste of time

P30 is a male pupil in orange class, who speaks English as his mother tongue. He wrote a short answer about the genome (57 words) with a lexical density of 46% at the end of the research lesson implementing intervention 2. His written work was poorly presented and difficult to read. The Biology teacher mentions P30 as one of the pupils who were "able to cope with" reading the genome text in class: "[P2] said straight away to me that that was very interesting, [P30] liked it, er, quite a few of the girls liked it" (Biology teacher, conversation 2). At the beginning of focus discussion group 6, during the practice question, only P30 said he liked Science and during the discussion he showed that he knew "mutation" had been covered in their Biology lessons. He participated actively in this focus group, in good humour, arguing against the TACS activity as a waste of time, but then went on to say:

P30: Oh no, the class would be a waste anyway, like, so

R: Oh, what, Biology?

P30: No, no, any class

R: Oh, you think school's a waste of time

P30: Well, yeah, like, you don't really learn anything, you never really learn, you just have to read a book at home and that's how you learn it. You don't really learn

R: Ok, so you would be more of a, erm, you like to learn on your own

P30: Er, no I just never pay, never really listen to it, like

R: Ok, so wouldn't you like lessons where you, you can kind of collaborate with your peers and learn together?

P30: No

R: You don't work like that

P30: Er, no, I don't

Later on in the focus discussion group, I returned to the same theme with P30:

R: Do you spend a lot of time at home reading?

P30: Er, not too much like

R: You don't, but you'd prefer to do that, than learn in class

P30: No, no, it's just that I don't learn in class either, so I have to read books.

P30 appears to find the school classroom environment totally unsuitable for learning and believes the only way he can learn is by reading books. In his research notebook comments at the end of the research lesson implementing intervention 1, he wrote about the activity of reading the genome text in class:

P30: I do think it was a good use of class time as it was easier to understand and I found it easier to read about it then to listen about it. I think it takes an effort to read and understand the book extract about the genome.

P30 has well developed opinions about school and learning, which he was able to express within the context of this research project; from the perspective of learning, he believes school is a waste of his time.

Themes from the data

To offer a deeper level of interpretative analysis than the descriptive analyses set out in this chapter so far, I performed a thematic analysis of the data from pupils through their research notebooks and focus discussion groups, and from conversations with teachers, following Braun and Clarke (2006) (see pp.137-141). The aim of this thematic analysis is to identify from the perspectives of pupils and teachers, the factors that need to be addressed to offer an adequate answer to research question 1: How can academic language development be integrated into mainstream curriculum lessons to the benefit of all pupils in a multilingual post-primary context?

Analysis began with data generated by the pupil participants, in order to be as bottom-up as possible, starting with the highest stakeholders in post-primary education: the pupils. The data was inevitably shaped by the questions put to the pupils, through their research notebooks and in focus discussion groups, so particular care was needed to ensure that this framework did not obscure pupils' unexpected perspectives and idiosyncratic concerns. Before adding the teachers' perspectives to the coded data from pupils, various categories were identified in the pupils' data, including one I named "pupil concerns".

Pupil perspectives

Pupil concerns

Learning

Academic English

Intervention 1

Intervention 2

Multilingual issues
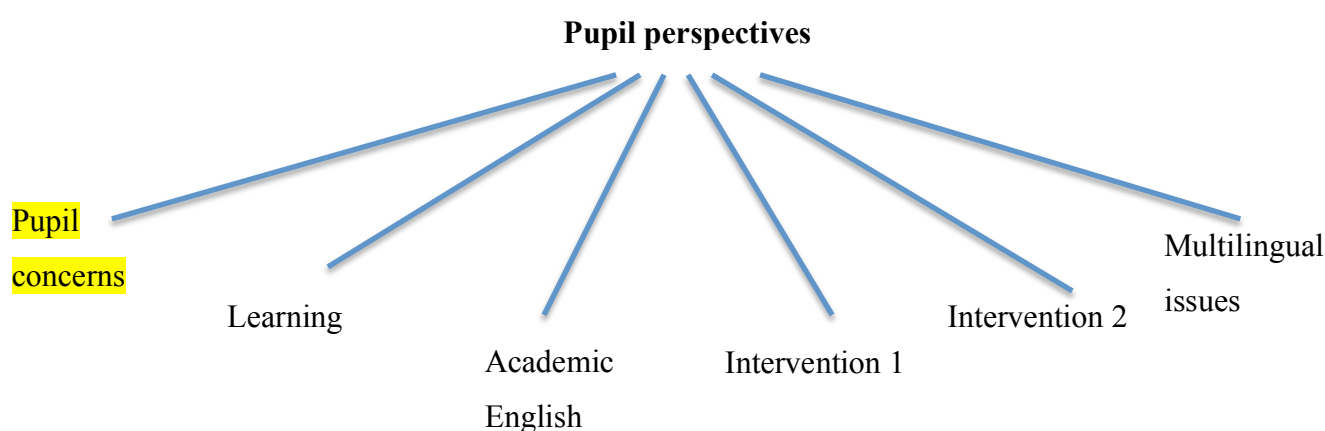
Pupil concerns is the category that contains codes associated with the attitudes and opinions of the pupils that were not specifically or intentionally elicited and are therefore the most interesting category from a bottom-up perspective. It is important that these ideas which pupils volunteered without prompting, are properly represented in the final analysis. The sub-categories within pupil concerns are: "classroom activities" and "other pupils", which feature prominently in the theme classroom interactions, and "use of time", which is important in the learning theme (see pp.211-217). Overall, in the data from all the participants, I identified three major themes: academic English, learning, and classroom interactions. The following sections provide accounts of what the pupils and teachers conveyed in the data about academic English development, from the perspectives of these three themes.

Academic English
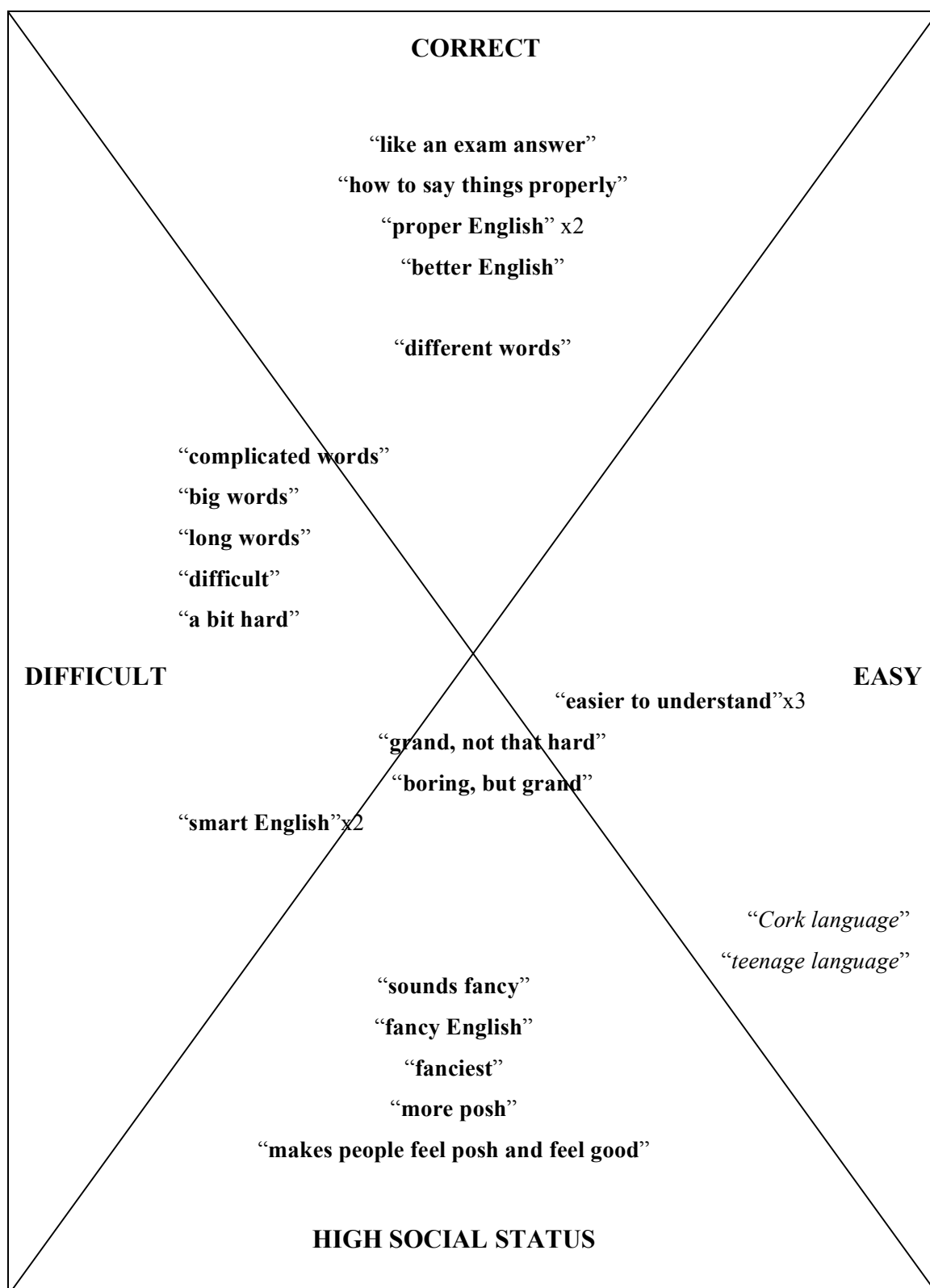
A representation of the theme academic English
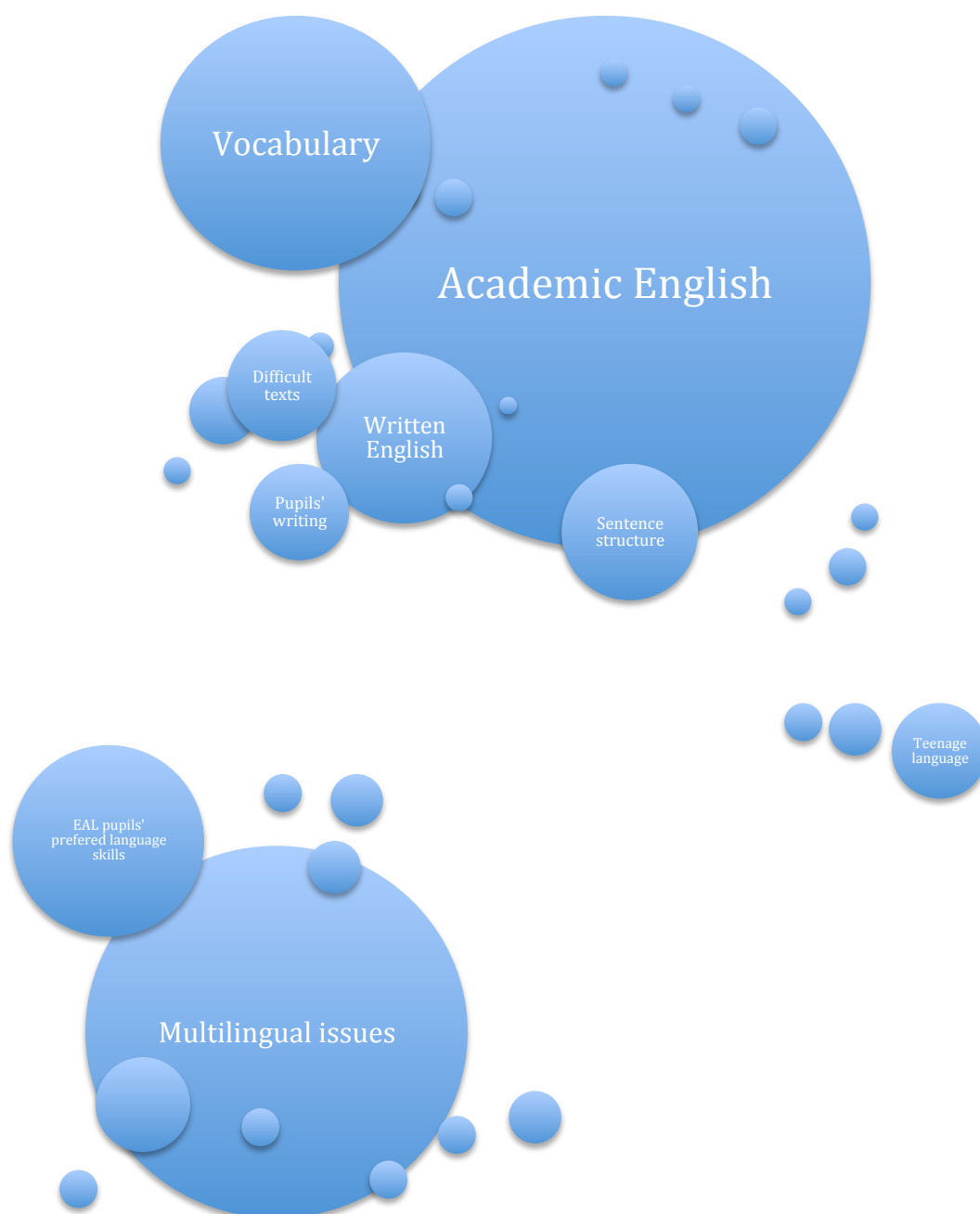
As academic English is the focus of this study and the subject of many of the questions put to the participants, it is not surprising that academic English comes through the data as a major theme. In the initial presentation of this project to pupils

and throughout the study, academic English was explained and stated as the focus of the research. However, even in the latter stages, some pupil participants needed clarification of what "academic English" means:

Is that like using big words or different words? (P59, focus group 1).

Academic English is an abstract concept (see chapter 3) that pupils were not familiar with before the project. The actual term "academic English" only occurs ten times in the contributions of the research participants; it is used in focus groups by only six pupils: four times by P3, twice by P12, and once by P9, P25, P27 and P39, with P9 and P27 using it to express that they are unsure about its meaning. The teachers do not use this term in any of the conversations. So while this theme is called "academic English", the academic English of this theme is a composite construct; it is made up of four main components: vocabulary, written English, sentence structure, and the sub-theme of multilingual issues which is included because it belongs in the theme with the strongest linguistic perspective, but is strangely separate in the data. The written English component has two core aspects: the characteristics of written texts which pupils find difficult to read, and, in contrast, the characteristics of pupils' writing. Teenage language is included in this theme as an antonym of academic English; this reflects the propensity in the literature to contrast academic language with conversational language (see chapter 3). Responding to questions about academic English, some pupils considered it to be normal within the school context, while others characterised it as more difficult and more correct than everyday English. P42 contrasts it to "Cork language", which she says would not be appropriate for an examination answer. P24 contrasts it to "teenage language", which he says is easy to understand. Some pupils associate academic English with high social status. The visual representation below displays the pupils' comments about academic English in relation to each other within a framework of these characteristics: correct compared with of high social status, on a continuum ranging from difficult to easy. These exemplify pupils' starting points for academic English development. Three of the pupils' comments present academic English as aiding understanding, while the majority imply a feeling of distance between the pupils' ordinary language and academic language. This distance may be perceived in terms of social status, described using words like "fancy" and "posh" in comparison to ordinary English, or in terms of correctness: "proper" or "better", or simply that

Pupils' characterisations of language

CORRECT

"**like an exam answer**"

"**how to say things properly**"

"**proper English**" x2

"**better English**"

"**different words**"

"**complicated words**"

"**big words**"

"**long words**"

"**difficult**"

"**a bit hard**"

DIFFICULT   **EASY**

"**easier to understand**"x3

"**grand, not that hard**"

"**boring, but grand**"

"**smart English**"x2

"*Cork language*"

"*teenage language*"

"**sounds fancy**"

"**fancy English**"

"**fanciest**"

"**more posh**"

"**makes people feel posh and feel good**"

HIGH SOCIAL STATUS

Key

academic English

everyday English

academic English contains difficult words which would not be used by teenagers in normal conversation.

The data supports the view, that while aspects of academic English may be addressed at school, the concept as a whole is not familiar to pupils and their attitudes towards it tend to be negative; it is an indefinite necessity required for success in education, rather than an aspect of life to be enjoyed. P1 is exceptional in her positive attitude:

> I don't mind it, like, I, you get used to it, I'm able to do it (P1, focus group 5).

P27 has a more pragmatic approach:

> . . . in texting and stuff, you wouldn't use it, but in exams you would 'cause you want to get the best grades you can, so you'd use it, . . . (P27, focus group 6).

The relationship of power between teachers and pupils is reflected in and may be affected by their different attitudes towards academic English. The teachers seem to take it for granted that they themselves are masters of the academic English of their subjects, but seem to see their pupils' linguistic abilities in deficit terms and to have low expectations of their pupils. The considerable linguistic achievements of the EAL pupils are not even mentioned.

The Biology teacher remarks

> "the types of things that I was miming were very technical and they couldn't possibly ever guess them without having the language" (Biology teacher, conversation 5).

The Religion teacher argues for using TACS after a topic has been taught, rather than to introduce a topic,

> "because they won't have the language, they wouldn't have the language to start off with to say the sentence" (Religion teacher, conversation 6).

Both teachers use the word "language" to refer to academic vocabulary:

> "Now, erm, are you interested in just the language, do you, are you interested in the formatting of the, of the paragraph, or . . ." (Biology teacher, conversation 2).

Both teachers seem confused by the purpose of developing academic English at the level of the sentence in the TACS activity, requiring grammatical features of

academic English. TACS is not intended as an alternative type of gap-fill vocabulary test as the teachers imply, from their lexically influenced perspectives:

> it'd have to be a very general sentence, not erm, like you know, you could, if I was doing world religions, like, the, the first sentence you could say introducing it is 'There are five major world religions' (Religion teacher, conversation 4).

> I had taught the language in the usual, conventional manner, so it was a way of testing whether they could recall the terminology and the vocabulary (Biology teacher, conversation 5).

This reflects a tendency among all the participants to see "academic English" as synonymous with "subject-specific lexis" or "vocabulary" or "words"; this is a tendency which is recognized in the literature (see p.73).

Vocabulary

Allusions to vocabulary are prevalent in the data. The Biology teacher stresses the large amount of technical terms found in the context of Biology, and that academic English development is vital on the level of lexis, for example in the topic of genetics. Intervention 3 is one suggested teaching technique for this, which the Biology teacher states she already performs in a less formal manner:

> I haven't done it in a formal setting like this, but I have asked them, 'Ok, has anybody any way of distinguishing between those, and it might be a mnemonic, it might be just a picture association or something with the word, . . . (Biology teacher, conversation 6)

The Religion teacher also focuses on vocabulary. For example, she sees her TACS sentence as lexically "difficult":

> We hadn't done 'stereotypes', we hadn't done 'media' (Religion teacher, conversation 4).

She does not mention the grammatical features that make the sentence challenging for pupils: the complex noun phrase which makes up the Theme; and the verb "pressurize", which is a grammatical metaphor as pupils would use the word "pressure" as a noun, but not "pressurize" as a verb (P39 and P59, focus group 1). The only word that was new to pupils in the Religion TACS sentence was "conform".

Many pupils cite lexis as the reason why the Biology classroom text was difficult to read (see pp.172-3) and some of the pupils' characterisations of academic English shown above refer to "words". However, "like an exam answer" (P42, focus group 2) and "easier to understand" (P11, focus group 4) refer to longer pieces of language, and "how to say things properly" (P24, focus group 5) and "better English" may refer to grammar. There is some awareness then, among these pupils that academic English is a complex concept, going beyond the level of vocabulary.

Written English

Written English is the second component or sub-theme of academic English, as identified in this data. Pupils stated various factors they believe make written texts difficult to read and/or understand. Most of the pupils who read the Religion texts found them easy to read. However, most of the pupils who commented on the Biology classroom text found it difficult, or admitted an aspect of difficulty. Challenging features they identified were: the words,

> because the vocabulary and words some people may not have ever seen them before (P19, notebook),

the length:

> because it was really long and kind of hard to understand (P16, notebook),

the lack of diagrams and the effort required to read it:

> Personally I would have found it easier to understand if there had been diagrams and less text but I understood the extract perfectly it just took a little bit longer (P11, notebook),

and the metaphor (see p.157):

> the example with the book was very confusing. I think it's easier to learn DNA without the example as a book (P3, notebook).

The teachers chose and provided the classroom texts, but offered no further comments about them; they seemed to regard these texts as sources of subject information and lexis, but not as potential resources for other areas of language development.

There is a contrast between the pupils' approaches to the classroom texts they were asked to read and the pieces of work they were asked to write. Pupils do not indicate that they see a link between these two types of text. In response to the focus group question "How do you feel about writing academic English?" P25 explained the importance of understanding a subject before writing about it and the need to practise writing:

> You need to know what you are talking about, like, you can't just throw anything in there, you need to kind of know the context and stuff like that, before you do write it in academic English . . . you need practice like, it's not a spur of the moment type of a thing (P25, focus group 5)

The Religion teacher also expresses the need for pupils to be prepared for writing:

> if they read a part and had a discussion on it and then there was some questions or, you know, "What is your opinion after reading this?" or, so, like, you know, maybe then they'd have already formed opinions or heard other people's, and then they might be able to write a few sentences on it. (Religion teacher, conversation 3)

However, a classroom text is not perceived as a model for writing in the data, although, in general, writing is seen as a challenge for pupils. Both teachers consider it necessary to give the pupils a framework for their writing:

> Yes, because otherwise they'll be sitting there looking at a blank canvas and they won't know where to start (Biology teacher, conversation 2)

The Religion teacher exemplifies the kind of prompts for writing she might provide for pupils, which are very similar to the rubrics of SEC examinations:

> 'Explain one point' to talk about this, 'State two reasons why' (Religion teacher, conversation 3)

and describes the pupils' attitude to written work as

> They're just very much, answer what they were asked (Religion teacher, conversation 3).

She also sees writing as indicative of pupils' grammatical proficiency; writing is

> where you get a good insight into how, or how they form the language (Religion teacher, conversation 1).

However, there is no mention of textual structure beyond the sentence and the word "genre" does not appear in the data at all, compared to over one hundred instances of the word "sentence".

The pupils were asked through their research notebooks if they write sentences like the TACS sentence; if they do not, they were asked if they would like to, and how their sentences are different. Of the pupils who answered that they do not write sentences like the TACS sentence, some preferred their own style:

> No, my sentences, if I was to write them would be clearer and not using big words (P44, notebook)

> Not exactly like that, but in a way that is less complicated and is understandable. (P51, notebook)

P39 recorded the TACS sentence in her pupil research notebook with a different word order from the original, omitting the verb "pressurize", and using "conforms" as a verb in its place; she wrote

> The sentence has structure most of mine don't (P39, notebook)

and responded to my further individual handwritten question with

> The real sentence makes more sense than my own (P39, notebook).

Sentence structure

Sentence structure is the third component or sub-theme of academic English, as identified in this data. This is distinct from the sub-theme of written English because the discussions about syntax arise in the context of TACS, where the sentence representing academic English is not written: it is mimed by the teacher and reconstructed orally by the class. Before miming each of her TACS sentences, the Biology teacher drew lines on the whiteboard at the front of the classroom, one representing each word in the sentence, indicating the number of words and providing an image to support the reconstruction of the sentence:

> ideally they were supposed to kind of keep note of where everything, the letter, or every word was (Biology teacher, conversation 6).

This action generated comments from pupils in focus discussion groups. Some comments were positive, about how this strategy helped, particularly with

> the little words like, 'cause you would fill in, like, kind of 'the' was like easy (P2, focus group 5).

Also:

> Well, like you know how many words there's going to be and the kind of
> structure of it, so it helped (P11, focus group 4)

The third sub-theme is called sentence structure because participants use the word "structure" in the data with a linguistic meaning. There are no direct references to grammar in the data. There are no instances of the following meta-linguistic terms being used by participants: noun, pronoun, verb, adjective, adverb, preposition, conjunction, clause, punctuation, collocation, or grammar. "Form" was used a few times, but only once in a linguistic context by the Religion teacher, as quoted above (p.204). P11 uses some linguistic meta-language: "structure" as above, "paragraph" in a notebook comment about the Biology classroom text, and "spelling" in focus group 4, referring to spelling as a potential source of anxiety. The Biology teacher refers to pupils' orthographic difficulties:

> a lot of them aren't very good at using even an index in a text book, you know, I
> find, and then their spelling is bad (Biology teacher, conversation 5)

It is remarkable that grammatical meta-language is barely present in the data. While leading pupil focus discussion groups, I found myself supressing my inclination to use the term "collocate", because I believed pupils would not know the word:

> They are very close in meaning, but it's more of a, academic type of a word and
> also, that's why I put it with this phrase 'conform to stereotype' (indicating the
> question written on a card) it kind of goes with 'stereotype' more than 'follow
> stereotype' or 'copy stereotype'. You'd usually use 'conform to stereotype' they
> kind of just go together. (Researcher, focus group 1)

P42 articulates the meaning of collocate, without using the word, in a different focus group, in the same context of the Religion TACS sentence, indicating that she understands the concept, but is not familiar with the term:

> I didn't know the word before she said it. Erm, but it just followed with
> 'stereotypes', isn't it, so when she explained it, it was fine (P42, focus group 2).

To summarize, the data suggests that academic English as a unified concept is unfamiliar to participants, although some pupils are aware that it is a factor in examination success. Considering academic English, participants focus on lexis, without using linguistic meta-language, and tend not to mention grammar, genre or discourse. Classroom texts are seen as informative for their content and as a resource for topic-specific vocabulary. Pupils may find long texts containing unfamiliar lexis

and metaphors challenging to read. Pupils tend to write in response to the instructions they are given (the pupils' written classwork demonstrates this: see pp.162-166). Teachers believe it is necessary to provide pupils with frameworks or prompts, to enable them to produce written work and tend to have low expectations about native English-speaking pupils' English proficiency. The native English-speaking participants do not mention multilingual or plurilingual issues, despite the fact that they also learn Irish and another modern language at school and have classmates with a different mother tongue.

Multilingual issues

It is striking that academic English and multilingual issues appear to be completely separate from each other in the data, as shown in the representation above (p.198). The participants who address multilingual issues are four EAL pupils: P3, P21, P31 and P49. These pupils' perspectives have developed through constantly engaging with English as an additional language throughout their school day, whereas their native English-speaking peers and teachers do not appear from the data to have an additional language perspective. These four EAL pupils all contributed through their research notebooks and through focus discussion groups, although P31 withheld his permission to be quoted from focus discussion groups. P3, P21 and P31 attended focus group 3 (see pp.182-183), along with P8 and P13. P3, P21 and P49 attended focus group 7, which was specifically for EAL pupils (see below). P3 is featured in a pupil snapshot (see p.191). The EAL pupils contribute multilingual perspectives on: the four language skills of speaking, listening, writing and reading; vocabulary and the need to ask questions; the distinction between academic English and conversational English; and mother tongue maintenance.

In focus group 7, P3, P21 and P49 readily discussed their preferences of the four language skills, to support their learning in English in the classroom. P3 learns more easily by listening, P21 learns best through reading and P49 finds both listening and reading helpful. P21 and P49 are both native Spanish speakers, but demonstrate quite different attitudes towards learning in English. P21 seemed to be less confident about her English, particularly as related to her accent:

> Because sometimes people don't understand me, but later I write it and they understand it. So . . . Because the way I talk, like, is not the same as they talk here in English, is different (P21, focus group 7)

P21 spoke less than P49 in the focus group and her utterances tended to be more grammatically correct than those of P49. P21 distinguished speaking from learning, explaining in focus group 3 that although she would talk more during pair work, she would learn more when the teacher is addressing the whole class; here she may also be distinguishing between learning subject content and learning EAL. Clearly, the EAL pupils' learning includes an additional linguistic perspective compared to that of the native English speaker and is consequently much more complex. P49 displayed greater fluency than P21, although her utterances in focus group 7 and her notebook comments contain more grammatical errors. P49 felt she was benefitting from practising spoken language every day, appeared to be enjoying the experience and was less self-conscious about speaking:

> I, in school it's always good because in the lessons, because when, if we have different accent, so the Irish people laugh with us, (P49, focus group 7)

P21's lack of confidence also manifests in her attitudes to reading and writing. She was one of the few pupils who said the Biology classroom text was not difficult, but added that it was difficult for her:

> I think the book wasn't difficult to read at all but I think that it was more difficult to me because i'm spanish and i'm just learning English. (P21, notebook)

Also, the fact that P21's written classwork in Biology was an exact copy of part of the original Biology classroom text, with no words of her own, may indicate that she lacked the confidence to attempt to write a Biology answer about the genome, although she uses writing as a communication strategy for people who cannot understand her accent. P31 and P49 avoided handing in any written classwork associated with this study, with no explanation. P3 wrote an extensive answer to question 2 as part of intervention 1 in Biology. P3, P21 and P49 all stated that their English had improved during their time in Ireland, but P3 and P49 both remarked that they had not written very much English in Ireland. P3 expressed her conscious awareness that writing academic English would support her development of academic English production:

> I think, though, I can speak now English, it's still, my English improved with the speaking, but I don't think it improved that much with writing, 'cause it's still that I can't really use that much academic English, so, it's like, with writing, ok, how can I build this up . . . with a right sentence (P3, focus group 7)

P21 also stated that she would welcome corrected written work:

> I think it's helpful, because you know what do you have to correct in your writing, so, it helps you. (P21, focus group 7).

The native Spanish speakers focused on vocabulary as a major challenge of academic English in a similar way to the rest of the participants. P21 and P31 stated multiple times that they did not understand words, with P49 highlighting Business Studies vocabulary as particularly difficult

> because they are not words that you use everyday (P49, focus group 7).

P31 refers to "works" (possibly intending "words") to explain his need to ask questions to his peers:

> Yes, this year I have to ask questions to my classmates because I don't understand some works but normally if I understand what i'm reading I am not asking questions. (P31, notebook)

P49 also explains that she has to ask her peers questions

> if I ask always the teacher i would stop the class all the time (P49, notebook).

These EAL pupils conform to the seemingly generally accepted classroom etiquette of not asking too many questions during a lesson, although their need for explanation is probably greater than those of their native English-speaking peers.

P49 provides an interesting example of not being aware that some language is inappropriate in the classroom. P49 relates in focus group 7, how she described a racist incident in class at the teacher's request, including using an undisclosed taboo word that she had not realised would be inappropriate:

P49: I explained to her and I say that word that I thought was right, but because when you are with your friends, young people, we say that word,

R: Ok

P49: But it's not a nice word, to say it to a teacher.

R: Yes

P49: And she said, 'No, [P49], no' and everyone laugh at that because, erm, I didn't know that, but now I do

Clearly, EAL pupils need to be taught the distinction between academic English and conversational English, to avoid using inappropriate language in academic contexts and vice versa. P3's written classwork provides another example (see p.191).

A final issue concerns mother tongue maintenance for non-native English speakers. P49 was reading an English rather than Spanish book in her spare time and responded incredulously when asked about her Spanish:

We won't forget it! (P49, focus group 7)

The Spanish-speaking pupils were using Spanish to communicate with each other and on social media with their friends. P21 and P49 did not make the parallel distinction between conversational Spanish and academic Spanish or express any concern about their Spanish development. P3, however, had noticed that German word order was challenging for her when she wrote email messages in German. Clearly, the school had not addressed the issue of mother tongue maintenance with these EAL pupils during their year in Ireland.

To summarize and relate this section to the whole theme of academic English, the perspectives of these EAL pupils highlight some issues that are relevant to their transition year cohort and possibly to transition year in general. One insight is that it would support the academic English development of all the pupils if they engaged in more writing activities, including practising using lexis and structures appropriate to their subject context, while developing an awareness of language that is inappropriate in post-primary academic English. Secondly, EAL pupils are compelled to ask their peers questions, to avoid monopolizing the teacher's time in class; this reflects a preference of the majority of pupils (see p.174), who would prefer to ask a question

to another pupil than to ask the teacher. This insight would support using pair work and group work in class, so that pupils have the opportunity to consult and learn from each other as an integral part of a lesson, rather than as a covert whispered exchange. Thirdly, the EAL pupils' acceptance, or lack of awareness, that they had received no mother tongue support during their transition year in Ireland may reflect the rest of the cohort's lack of awareness of their own linguistic needs or expectations that they be met; they had also received very little mother tongue (English) support, other than on the level of vocabulary.

In conclusion, the data categorized under the theme of academic English reveals a low level of awareness and expectation. Academic English is generally perceived to be challenging subject-specific or highbrow lexis. Producing written work is considered challenging for pupils, but transition year does not involve writing development. Generally, despite recognizing these areas of educational shortfall, the majority of participants did not appear to be concerned about academic English development.

Learning

While "academic English" is a composite theme, represented by floaty bubbles (p.198), "learning" is a much more concrete theme, represented using directional arrows. Within this theme pupils' diverse ideas about their own personal learning are organized into an order. This is then developed adding the linguistic dimension of how different pupils produce written academic English, from the perspective of the four language skills: the receptive skills of listening and reading through which pupils encounter subject content in its appropriate linguistic form, and the productive skills of speaking and writing, through which pupils can develop and display their subject knowledge.

Learning is of central importance to the participant pupils; how much they learn is a main criterion by which they judge lessons. For example, P42 criticizes the amount of time the TACS activity took in Religion,

Erm, it takes a while, like miming takes a while, er it takes a lot of the class. Do you know, she took a lot of it trying to explain it to us, so, erm, but it was fun, I suppose so (P42, focus group 2)

while P39 endorses the class discussion in Religion because of how much she learned:

P39: it opened my eyes to understand addictions and how bad addictions can get. Made me learn more about alcohol & drugs and the effects it can have

R: Thank you for your comments. Do you think you learned these things from reading the articles or from talking about them afterwards, as well as hearing other stories and examples?

P39: I think I learned from talking afterwards. I have also learned previous to the class from friends and parents (P39's notebook)

An ordered representation of pupils' conceptions of learning
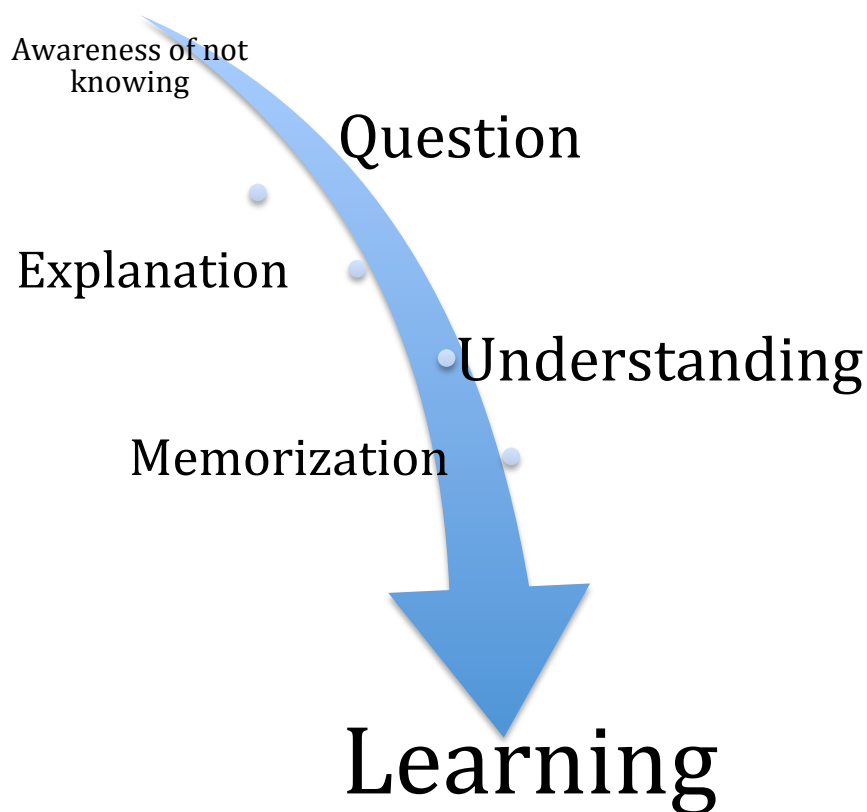
"Learn" in this sense is close in meaning to "know about something for the first time", "develop knowledge" and/or "understand". Pupils also use "learn" with a

meaning similar to "memorize" or "be able to recall". This aspect of learning, associated with memory, usually follows the stage of understanding,

> Er, just by picking out the one difference and then learn the meaning of that (P54, focus group 8)

although some pupils may intentionally memorize without understanding (see the pupil snapshot of P9, pp.192-193). When pupils have questions about a subject, this indicates a desire to understand and to receive an explanation. Different pupils prefer different types of explanations: those provided by a teacher in a class,

> P38: if you ask the teacher why it is that way, he'll explain it back to you, so you can learn yourself (P38, focus group 8)

explanations from a book,

> I found it easier to read about it then to listen about it. (P30, notebook)

or explanations given by other pupils,

> I think it help as you can learn things from your friends that you might not understand (P32, notebook)

Understanding may involve time and effort, for example understanding the Biology classroom text, which had the purpose of explaining technical terms:

> it had words that I did not understand but because I had my own time to read it I fully understood it at the end. (P24, notebook)

or understanding may involve one or all of a sequence of activities, as staged in intervention 1: reading, discussion and writing,

> it let you take in the information at your own pace and you can look at the words while talking and thinking about it. It is helpful this way as some people learn better by reading and visualizing while others learn through discussing & talking. (P52, notebook)

> I felt writing helped understand. (P9, notebook)

Discussion for learning may involve using familiar, everyday language,

> talking about it with the other students made it easy to understand because we were using teenage language (P24, notebook)

Different pupils have different strategies for memorizing. For example, hearing a phrase, such as "conform to stereotypes" in the context of sentences, and being repeated through the course of a lesson:

> P42: Mm it makes it easy to understand, well, like when she uses them in a sentence, it's, it makes more sense, I suppose

> P45: Yeah, it's grand when you hear it like, over and over, but if you hear it one time, then it's a bit hard (focus group 2)

or simply hearing it,

> I don't know, I just remember things that I'm told (P40, focus group 8)

discussing it,

> I definitely think that talking about the reading helps because it contributes to my understanding of the topic being studied. When the topic is discussed, for me, it makes it more memorable. (P42, notebook)

reading it,

> Its easier to learn definitions straight from a book [easier than by the miming activity] (P22, notebook)

or writing it,

> Writing . . . I don't know, it sticks with you like, instead of saying it and forgetting it (P47, focus group 8).

> if you write it down you're not going to forget it then (P38, focus group 8)

P54 is unusual in that she memorizes by articulating subject knowledge out loud,

> Yeah, I speak when I'm, I speak when I'm learning alone as well though, if I say it to myself, so I remember it . . . it just helps me remember it better if I say it again (P54, focus group 8).

Pupils may also have different strategies for understanding and memorizing content from different subjects:

> I, I learn better when someone tells me the information, but then for other things I make better sense of it, if it was like erm something science, I might learn better with a diagram or something (P23, focus group 9)

Learning can also refer to developing competence, such as being able to use academic English:

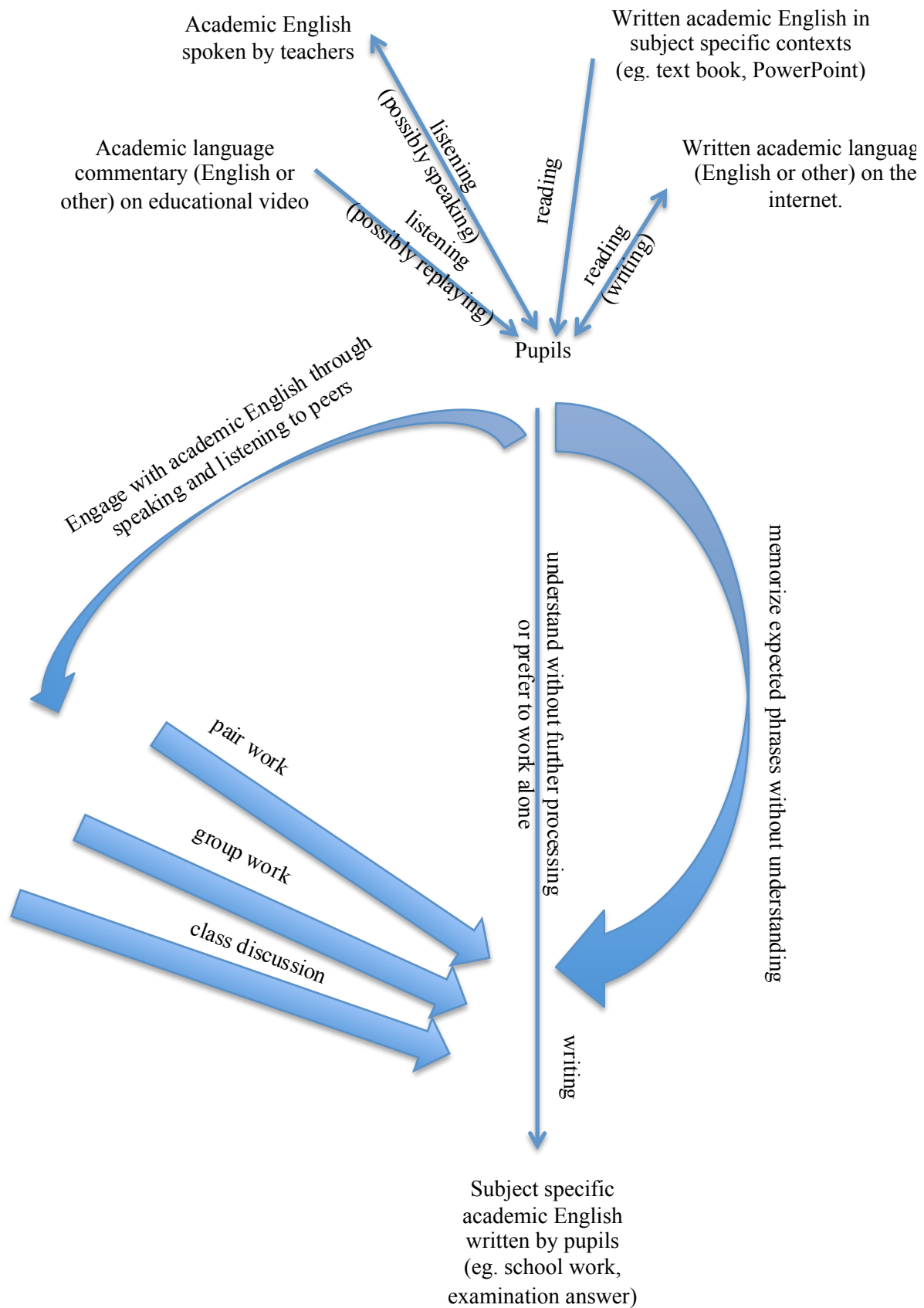> P24: You have to learn it like . . . Yeah, like the language and stuff

> R: What do you mean by that?

> P24: Like how to say things properly and stuff (focus group 5)

So, the data presents a pupil perspective on learning subject content which involves explanation, leading to understanding, which may then be reinforced by

memorization, for retention. Relating this perspective to the context of a written task, where pupils are expected to produce academic English to display their subject knowledge, the data indicates that some pupils may not attempt to understand the language, but may reproduce what they believe is expected by the task, this may involve copying from a source text (see p.163), some pupils may understand the language immediately from the teaching source and not require any further explanation, some may look to their peers for help in understanding, and some may return to the teacher for clarification. The diagram below represents these processes. This diagram shows the original source of subject content as academic English in various forms (educational video commentary and written text on the internet were only mentioned briefly by pupils in the data, who referred mostly to listening to the teacher and reading either books or the teacher's projected PowerPoint presentations, however classroom and home technology provide significant sources of academic English). Pupils encounter the subject content, through listening, reading or possibly through interaction with the source, for example asking the teacher a question. Pupils may then write their academic English text, without further need for explanation and with varying levels of understanding, or they may benefit from collaborative activities with their peers, which support their production of written academic English.

Pupil perspectives – learning and the four language skills

Academic English spoken by teachers

Written academic English in subject specific contexts (eg. text book, PowerPoint)

Academic language commentary (English or other) on educational video

Written academic languag (English or other) on the internet.

listening (possibly speaking)

listening (possibly replaying)

reading

reading (writing)

Pupils

Engage with academic English through speaking and listening to peers

memorize expected phrases without understanding

understand without further processing or prefer to work alone

pair work

group work

class discussion

writing

Subject specific academic English written by pupils (eg. school work, examination answer)

To summarize, pupils are much more interested in and aware of the process of learning subject content than they are in developing academic English. In general, their conceptualizations of learning involve understanding an explanation, which they may prefer to be written or spoken and possibly accompanied by visual support, such as diagrams. Discussion may foster the process of understanding challenging material, in addition discussion with peers may involve using familiar language to understand academic language and subject content. In order to retain newly understood knowledge, pupils may employ various memorization practices. Pupils are aware that they learn in their own individual ways.

Classroom interactions

The interpersonal dynamics of the classroom and how these affect the success of various types of classroom activity feature strongly in the data. Both pupils and teachers address interpersonal dynamics with reference to: class discussion, classroom noise levels, acknowledgement of pupils' effort, laughter and humour, pupils' feelings of confidence, comfort and intimidation, classroom seating arrangements, the diversity of pupils, and pupil laziness. As well as this, pupils contributed opinions about group work concerning: performing activities with friends, hearing other pupils' ideas, getting things done and off-task talk. The teachers agreed with each other that the participant pupils were an unusually reticent transition year cohort, and suggested some possible reasons for this. As seen in the previous theme, pupils see learning as the main purpose for a lesson. Pupils also expect lessons to be interesting, which implies that they want to participate in and learn through engaging classroom activities. As well as a learning environment, the classroom is a social arena encompassing changing relationships between approximately 30 pupils as well as their relationships with their teachers; the participants demonstrate their awareness that this social aspect can have a considerable affect on learning. This theme, classroom interactions, traces the various perspectives that pupils and teachers offer about the organization of classroom activities in terms of the quantity of pupils involved and the resulting quality of engagement.

The same four patterns of classroom interaction are used in this analysis as were used in the pupil focus discussion groups: the whole class, groups of pupils, pairs of pupils and individual pupils. "Whole class" refers to situations when all the pupils give their attention to the same source, which may be: when the teacher is addressing the class as a group or the teacher is addressing one pupil, expecting the rest of the class to listen; one pupil is speaking, either to the teacher or the rest of the class; or when some kind of visual stimulus is displayed on a board or projection screen at the front of the classroom. In whole class interactions usually only one person speaks at any one time, so that everyone else can hear them. "Groups of pupils" refers to a minimum of three pupils in a group, up to a maximum of half the class. Groups of three or four pupils would generally be considered "small groups". The Religion teacher refers to the group of nine pupils who attended her TACS class as a small group, as it was a whole class activity, but a lot of the pupils were absent, so it was an unusually small class. "Pairs of pupils" refers to dyads, when two pupils work together. This probably involves the pupils speaking and listening to each other, so with approximately fifteen pupils speaking at the same time, the classroom tends to be noisy. "Individual pupils" refers to the situation when pupils are working on their own in the classroom. They may be working on subject content in written or visual form, for example in a book or on a computer, and may be producing written language. They are probably not speaking as part of the formal learning activity, so the classroom tends to be quiet. The teacher may be available for consultation, but pupils may be reluctant to ask for assistance when the rest of the class is able to hear their question:

> Well, I just don't like it, 'cause you know when you're just sitting there working quietly, working away, and you've got a question and the teacher comes over, everyone's listening and then I feel stupid, 'cause you want to "Oh, could you say this to me?" "Ok, well" and if it's something simple I kind of go, oh they're all judging me and all think I'm stupid (P23, focus group 9)

Post-primary classrooms tend to be arranged with the pupils sitting in rows, behind tables or desks, all facing the same way, with a whiteboard and/or a projection screen at the front. This arrangement favours the interaction patterns whole class, pairs of pupils and individual pupils, and tends to impede pupil movement during a lesson, although the data does not include participants mentioning such practical difficulties in association with group work. It is easier to organize groups of pupils to work

together when there is space in the classroom, for example if it is possible for pupils to sit around tables, or if the room is not overly full of furniture.

Group work is the most prevalent pattern of classroom interaction in the data. Because of the favourable comments of the participants, the revised versions of both intervention 1 and intervention 2 include a shift from the whole class pattern to group work. In intervention 1, the original teachers' guidelines propose a class discussion, with no preparatory group work, whereas the revised versions include a small group discussion stage to prepare for whole class feedback. In intervention 2, the original teachers' guidelines propose TACS, where the Teacher Acts to the whole Class, which Speaks, as an introductory activity for a lesson or topic, whereas the revised version uses TACS as a demonstration of the group activity of miming academic sentences, for the purpose of reinforcing academic language and revising a topic. Intervention 3 utilises group work, pair work and the whole class pattern in the original version. The Religion teacher was enthusiastic about using the miming activity of intervention 2, both in a small whole class situation (of nine pupils) and with multiple groups in a large class (six groups of approximately five pupils):

> Yeah, and they loved it, they were better in that way, I think, for shouting up, like I had only seven or eight the day we did it, and they were grand because they were, there wasn't much, you know, they weren't really shy, but in small groups they were better (Religion teacher, conversation 6)

She reflects about the miming activity with the full class in six groups:

> I feel that's the best interaction I've seen out of them   (Religion teacher, conversation 4)

Some pupils like group work because everyone can have a say,

> . . . in group work it's like everyone can speak or, and in turn, it doesn't even have to be in turn, you just, there's not a head spokesperson or anything (P42, focus group 2)

and pupils appreciate hearing their peers' understandings or opinions:

> Yeah, but group work works well, because you get other people's ideas, or what they think it is (P45, focus group 2)

Group work can inspire a sense of camaraderie:

> . . . in group work you sit there and think, work together. You're kind of like, it's easier than working by yourself, working in a team. But then sometimes you don't get anything done if you're working in a team as well (P39, focus group 1)

Unfortunately this can lead to the significant disadvantage of being distracted from working on-task, by the temptation to talk off-task:

> Like, there's a tendency, like, if they go into groups, about two minutes later, we can go off the subject, because the teacher's not supervising us, we just go off and talk about what we're doing and stay off the . . . (P12, focus group 6)

This issue emerged as a conundrum concerning whether it is better to work with groups of friends or with groups of less familiar classmates. Some pupils find it helpful to work with groups of friends:

> But then like with your friends, you feel more comfortable like and you talk about what you're supposed to be talking about, in like a way that you can understand like (P24, focus group 5)

or pupils who find each other easy to interact with:

> I think that sometimes having groups are a good idea. It depends if the people in your group are people you can feel confident sharing ideas and opinions with. If the teacher asked the groups to share their ideas and discuss them with the class I think it would help the learning process. (P42, notebook)

Mixing genders can be an issue:

> And another thing is, maybe, in some cases, the boys and girls might not talk to each other (P12, focus group 6)

It can happen that pupils disengage from a group activity altogether because of the other pupils involved:

> if you even take them out of their groups, put them in random groups, that's not their friends, they also find that, you see groups of them sitting, looking at the ceiling and that, not talking to each other (Religion teacher, conversation 4)

P9 sees group work as pretence: as individual pupils working on their own in the guise of collaboration, with no interaction taking place:

> Nobody speaks, nobody speaks like, when we're put in to group work, nobody normally really talks to each other about, you just kind of write down your own answer, but nobody's actually working together (P9, focus group 5)

The size of a group may affect pupils' comfort and readiness to interact:

> I find it easier to talk and say my opinion in smaller groups and it feels more personal so we can learn and understand the concepts better. (P43, notebook)

> P52: I like smaller groups as well

> P59: Yeah, I don't like really big groups (focus group 1)

Some pupils prefer the intimacy of small groups and others believe larger groups facilitate discussion more readily,

> I think that's because in Religion the groups are too small, there's only ever like three of us, like, if there was like six of us, more people would talk, because more people know each other and then . . . (P6, focus group 5)

The subjective or objective nature of the subject of study may also be a significant factor in pupils' willingness to contribute to classroom interaction. In Religion, pupils are more likely to be sharing their personal attitudes and opinions than in Biology, where group discussion is more likely to be around understanding concepts and processes. For this reason a pupil may prefer working with a group of friends in Religion, but might admit to getting more work done with a group of less familiar classmates in Biology, because they would be less inclined to talk off-task.

> Erm, oh, I was going to say, if the groups are random, so like they're not with your best friends, you might actually end up talking about the actual Biology, 'cause like, if you're not friends, you're not going to talk to them about everyday life, you know. (P6, focus group 5)

The pupils of focus group 6 discussed the best way to form groups, favouring the teacher selecting the pupils for each group; P15 preferred the teacher to arrange the groups, P27 pointed out that if pupils form their own groups the process will be noisy and some pupils might get excluded, P12 added that the groups might be uneven and P30 said that he did not have a preference.

All these comments rest on the underlying assumption that pupils have ideas to contribute to group discussions and roles they could play in group activities. The issues are the optimum number of pupils for a group activity and the most appropriate level of friendship between them to foster the confidence to enable them to participate fully in classroom interactions. However, if pupils lack interest and motivation, they may not engage in group work if they are not closely monitored:

> I don't think talking with other students helped to write about it as not everyone is interested in the subject so we talk about different topics when put into groups. (P37, notebook)

The Biology teacher is aware of the importance of classroom activities which engage her pupils' attention and motivate them to perform the learning task.

> With the best will in the world, I don't think that, you know, they're going to start using the technical language unless they really have to . . . You know, in a group, like (Biology teacher, conversation 3)

To facilitate their participation, the Biology teacher uses the group activity of giving presentations about different genetic disorders, so that pupils work together to prepare the real task of teaching the rest of the class:

> So, I can encourage them to use as much technical language as possible, like is it a recessive or a dominant gene? Is it, is it homozygous or heterozygous in the person with the condition, you know, this kind of thing, and let them, you know, get them used to, that's the only way I could image that they would start talking about, about (Biology teacher, conversation 3)

This activity necessitates interaction as well as the use of academic English because of the real task each group has to perform in front of the class. The responsibility of teaching the rest of the class may motivate pupils who are not interested by the topic to engage with the group activity. They may find it helpful to learn from each other as they prepare their presentation together in their group:

> If the students can teach each other it would help people learn as people listen to their peers. (P50, research notebook)

However, some pupils complained that in this kind of group situation, lazier pupils would leave the more diligent pupils to do all the work. Some pupils prefer pair work to group work:

> if you're in a pair, you might be more likely to talk and be more open. And if you didn't understand something you could ask the other person. I'd be more likely to ask a question in a pair than in a group or a class (P23, focus group 9)

> I think pairs is best, over group work (P54, focus group 8)

However, the difficulties concerning interpersonal dynamics described above in relation to group work may be exacerbated in pair work:

> It is easier to work with your friend, I think. It's like you can talk nicer . . . like if you were put with someone that you don't know, you wouldn't want to talk. (P59, focus group 1)

> If you don't know the person, it's more awkward in a pair (P23, focus group 9)

The Religion teacher identifies the advantage of having the opportunity to observe pupils during group work and pair work activities:

> But it's easier for the teacher too, because you're walking, you actually observe, like you are actually getting a chance to observe and that's how you learn about the, that's, I think a really beneficial thing for a teacher to be able to do, walk around, observe. (Religion teacher, conversation 4)

Some pupils prefer classroom activities that involve working alone:

> so like, in a class, when you work alone and the teacher comes around, I like that the best (P40, focus group 8)

This may be because they find it easier to concentrate:

> There's no distractions like, so it's, it's only you like, you know, and what's in front of you. (P38, focus group 8)

Other pupils dislike the quiet atmosphere that usually accompanies this pattern; P23 calls it "very intimidating" (P23, focus group 9),

> But then, I hate it when the classroom's quiet, (P39, focus group 1)

> I like it noisy! (P45, focus group 2)

Pupils may prefer activities that take advantage of the opportunity for live interaction in the classroom:

> I don't think it was so good to read it on my own because there were some sentences that I didn't understand. I think it would have been better to read it loud and explain if there are questions. (P3, notebook)

The whole class interaction pattern is likely to feature for at least a portion of any lesson, for example when the teacher gives instructions at the beginning of the lesson. Some pupils prefer this for learning:

> I prefer the teacher talking to the class than to group work (P23, focus group 9)

The Biology teacher sees this as her main teaching style; she explains that she would not usually use the individual pupils pattern in her lessons:

> I would never have got them to sit in class like that and to just read a passage. Ok? I tend to, I tend to teach from the top of the class, without referring much to the textbook. I tend to look on the textbook as an aid to them, rather than an aid to me . . . even in exam classes, I'd use Power Points and that kind of thing and I'd explain the concepts (Biology teacher, conversation 2)

The Biology teacher's style is active and engaging (see pp.171-172), she clearly wants to interest her pupils in her subject. Pupils are critical of teachers who do not interact with the class. The data contains very little about the relationships between the pupils and the teacher, but it is clear that pupils see engagement as reciprocal: they want the teacher to engage with their lesson just as much as the teachers want their pupils to engage. P21 and P49 discussed Business Studies classes in focus group 7:

> P49: Oh yeah, the company [project] was really good, but then in class we are always, she is always writing in the board and we are always copying and that's really boring, because
> P21: Yeah, we don't do anything
> P49: Anyway, I don't understand it or I don't want to understand it
> R: Ok
> P49: And I'm just thinking about, I'm in my own world and I'm not thinking (focus group 7)

No participant pupil expressed that they wanted to copy down information during a lesson. Such activities, considered boring, are unlikely to promote learning, especially in transition year, where there is no examination motivation. P21 thought that the Biology teacher overused her PowerPoint slides, but found the whole class interaction pattern more helpful than pair work or group work.

> I don't like the board when it's Biology because when you always do the same and I don't know it's like boring. I like, people don't like listening to it, listening, you know, I find that boring and it's better when we do like, when she talk in class and she like show us the things that she's talking about and make examples and everything. (P21, focus group 7)

To summarize, this cohort of transition year pupils displays a diverse range of attitudes towards classroom interactions. The two participant teachers express their awareness of pupils' different levels of academic aptitude, and express concern about the enigmatic reticence of the cohort, possibly caused by the two classes having been rearranged between third year and transition year. The Religion teacher sees group work as a way of addressing this issue

> . . . they know, they've grown up with each other since first year, so they're well used, it's not like they're strangers. So I think that's valid, best practice to put them in separate groups, all different groups (Religion teacher, conversation 4)

and she acknowledges the special role Religion classes can play in inspiring confidence in pupils who may be reluctant to participate in classroom interaction:

> and, erm, because it might give the shyer ones, you see some of the boys in this class, er, like, they might not usually ever speak in any other class. You know, like, they'd be kind of seen as trouble-makers, that kind of thing. (Religion teacher, conversation 1)

From the perspective of classroom interaction, then, attempts to integrate academic English development into mainstream curriculum lessons to the benefit of all pupils should take into account the various interaction patterns different pupils may favour, and how these patterns and the language skills they require suit the linguistic aspect being developed: lexis, grammar or genre. If group work or pair work is appropriate, the organization of the make up of groups or dyads should be considered with reference to the subject content of the activity and how different combinations of individual pupils in the class may affect their learning together.

> P50: Yes. If the students can teach each other it would help people learn as people listen to their peers. (P50, research notebook)

To conclude, thematic analysis of the data produced three main themes: academic English, learning and classroom interactions. The data displays considerable diversity on all these issues. There are various views about the desirability of using academic English and its attainability. All the participants, including the teachers, tend to focus on the lexical aspect of academic English and seem to lack awareness of the aspect of genres and their associated grammatical patterns. The EAL pupils' linguistic prowess is not acknowledged. Diversity is apparent in pupils' explanations of how they learn, featuring all the language skills, with different pupils preferring different ways of learning, both learning as understanding and learning as memorizing. The classroom interactions theme adds the social dimension to the learning theme, with pupils explicitly disclosing their reluctance to work with some of their classmates in dyads or groups, while also admitting that they are less likely to stay on-task when they are working with their close friends. Some pupils prefer not to interact with other pupils in the classroom. The data contains evidence of diversity on many levels.

This thematic analysis provides important perspectives which, together with the linguistic analysis of texts: examination papers, classroom texts and pupils' written

classwork, and the thick description of pupils' and teachers' attitudes towards the three interventions, inform the discussion of the next chapter.

Chapter 8 – Reflections

This research project is about learning at post-primary level. Academic English is integral to this learning, but is inadequately recognized by the main stakeholders: the pupils. The pupil participants' main reason for going to school is to learn, in order to succeed in public examinations as a means of progressing in life in Irish society (pp.211-212). The teacher participants' rationale in their work is also that their pupils learn and succeed in examinations (see pp.169-170 and p.172). Clearly, this represents a favourable scenario for learning in an examination-driven context. The research site school may not be representative of all post-primary schools in Ireland, however it is not an extreme case: it is neither elitist, nor does it have DEIS status (see pp.17-18). In this context, the participants do not display awareness of the importance of language development for subject learning or particular concern about academic English development beyond the level of lexis. Examinations are another significant factor in this context. Leaving aside the question of the appropriateness of the examination system, irregularities in the language dimension of public examination papers provide further evidence of a lack of linguistic awareness, at the level of the SEC (pp.152-153).

Without linguistic direction from the examination body and without an awareness that "learning a subject is inextricably tied to language learning within that subject" (Fleming 2010, p.7), the participants of this study appear not to have appreciated the pertinence of this research project for their teaching and learning situation. Kramsch questions whether the applied linguist can communicate with the foreign language teacher (p.67), highlighting the need for each party to reflect on how they themselves use language. In the case of this research, the teacher and pupil participants perceive no force motivating them to reflect on their language use. As an applied linguistics researcher I attempted to suggest classroom interventions, with linguistic aims that the teachers and pupils did not appear to value or understand.

Some examples of evidence for the participants' lack of awareness and/or interest in academic English development beyond the level of lexis:

- the teachers appear to have chosen their classroom texts for intervention 1 purely on the basis of their subject content.

- the participants did not exploit interactions in the classroom as opportunities to develop spoken genres (pp.217-225).

- the teachers stated that pupils need to be given a framework for their writing, but did not refer to genre or any rationale for writing frameworks (p.204).

- the teachers did not take advantage of opportunities to comment on the form of the classroom texts to develop academic English (p.203).

- the teachers did not display adequate linguistic awareness to lead discussions focussing on textual and grammatical features of academic English.

- participants did not use linguistic meta-language or refer to grammar at all in their contributions to the data.

- pupils did not appear to recognize that the word list or mind map that they had created previously could be integrated into their writing on the same topic (pp.160-161).

This general lack of awareness is an important finding. Clearly, in a context where pupils are motivated to learn and teachers are motivated to support and advance that learning, academic English development should be valued as integral to classroom activities. The teacher participants are not equipped to integrate academic English development into their lessons beyond the level of lexis, because they are not aware of the importance of other levels of language and they do not possess adequate linguistic knowledge or meta-language to be able to discuss academic English genres, grammatical structures and lexical patterns. It is imperative that teacher education raises teachers' awareness of the linguistic issues integral to their subject and equips them to develop their pupils' academic language use. This chapter reflects on linguistic awareness as explored through the three classroom interventions of this study.

Intervention 1

Intervention1 was designed to explore the development of academic English at the level of text or genre. The reading phase was intended to be completed as homework before the research lessons which involved class discussion, however, both teachers allowed class time for pupils to read. The reading phase seemed to interest the Biology teacher the most in this intervention, and she was pleasantly surprised at how well some of her pupils succeeded in understanding the text. She was not surprised that some of the pupils struggled to read, knowing that they had "literacy difficulties" (Biology teacher, conversation 2). The Religion teacher used the texts she had chosen to introduce the research lesson, but her focus was more on the class discussion phase of the intervention. The three classroom texts chosen by the teachers were very different from each other (see p.159). The teachers also implemented the discussion phase differently. The Religion teacher found a whole class discussion difficult to facilitate. As the pupils were not used to class discussion, it could be that this form of interaction would develop if the pupils became familiar with the genre: its framework and associated rules or guidelines as suggested in the original intervention 1 guidelines for teachers (see appendix 3, pp.291-292). The Biology teacher facilitated group discussions instead of attempting a whole class discussion. The reading and discussion phases were intended to bring pupils into their zone of proximal development to facilitate learning. The Biology text is challenging; it is extremely dense with information and most of the pupils found one or more aspects of it difficult. Reading this text would be expected to bring a learner to the boundary of their knowledge. The group discussion phase, which followed the reading, provided pupils with an opportunity to clarify difficulties with their peers. The Biology teacher was also available for consultation, while she was monitoring the group work. Pupil reports about the effectiveness of the group discussion vary, with some pupils saying it was helpful and that their group used some of the scientific vocabulary of the text in their discussion, while other pupils were mismatched in their groups in terms of participation. In this situation it might be advantageous for the teacher to rearrange groups or allow pupils to change groups.

The Religion texts were not as challenging, except for non-native English speakers (see p.159); the information conveyed was biographical about celebrities who had abused addictive substances. The perspectives of the two texts provided a basis for the whole class discussion, with pupils contributing examples of other celebrities from their prior knowledge. Every pupil had the opportunity to contribute, or ask a question, although not every pupil spoke. In this case, pupils may have made connections and built on their previous knowledge through reading the classroom texts, thus accessing their zone of proximal development and developing their understanding of this topic. Some pupils reported their appreciation of hearing other pupils' ideas in the class discussion. In Religion, the writing phase of intervention 1 was not given importance (see p.169). The pupils who submitted written work had not incorporated into their writing the words which they had recorded previously on the same topic in a word list or mind map (pp.160-162). The opportunity to develop understandings about addiction further, through writing, was not utilised. Furthermore, the opportunity to discuss genre was missed, especially in view of the failure of the second text to represent a recognizable genre (pp.155-156). To exploit this learning situation, pupils could have been guided to write in a real world genre, to express their understanding of substance abuse, for example an email message from one of the celebrities to a friend experiencing a similar problem.

In the second research lessons (with both classes) implementing intervention 1 in Biology ample time was allowed for the writing phase. Pupils responded directly to one from a choice of two questions which each suggested four content areas for consideration; many pupils used the four areas to structure their writing, some with no attempt at producing any kind of textual cohesion. However, some pupils produced texts displaying features of academic English (pp.163-165) and others attempted to do so (p.165). Again, this situation provided an opportunity to develop academic English at the level of text or genre, which was not utilised. Teacher education of academic English development could equip teachers to exploit classroom texts for their linguistic features.

On reflection, when pupils are required to write at school, their purpose in writing should always be made explicit and this should be associated with structural devices, for example bullet points and headings for a report, or paragraphing and conjunctions

for an essay.   The participant teachers state that the pupils need to be given a framework for their writing (p.204).   However, pupils could be made aware of the perspective of genre and trained to recognize for themselves the framework needed for a piece of writing when the purpose and context are clear.   They could then choose the appropriate genre and its associated linguistic features: stages, forms, appropriate grammatical structures and lexis.   The text, genre or discourse level of academic English should be addressed as a matter of course at every opportunity in the classroom until it is apparent from pupils' writing that they have mastered this aspect of academic English.   It should become part of pupils' expectations of school that they know what structures they are supposed to use in schoolwork as well as in examination answers.   Then, pupils will be empowered to ask for clarification when they encounter ambiguity.

The data from this project reinforces previous research suggesting that teachers' conceptualization of academic English focuses primarily on lexis (p.73).   Teachers tend not to appreciate the importance of grammatical forms and genres as levels of language that carry meaning and support learning.   For example, verbs with modal auxiliaries used to refer to the past to convey past possibility in History, such as "Druids may have performed sacrifices".   The headings of a science investigation report: "Aim", "Procedure", "Results", "Discussion" and "Conclusion" clearly define the stages of this genre and they also indicate the appropriate verb forms; where the aim and conclusion sections refer to general laws of nature, present simple verb forms are appropriate, whereas the procedure and results use past verb forms.   The discussion section is likely to require a diversity of verb forms.   Once pupils have become familiar with a model report during classwork, they should be guided to notice linguistic features of the report, such as the appropriate choice of verb form. This aspect then becomes explicit for pupils; they become aware of the genre and can refer back to the model report and linguistic instruction when they are required to produce a written text of the same genre, thus becoming empowered to make linguistic choices appropriate for a science report.   For discussions focusing on textual and grammatical features to happen in post-primary classrooms, teachers have to possess the linguistic awareness and competence to lead the discussions and have to understand their importance for the pupils' learning.

The wide range of ability in the skill of reading revealed by intervention 1 in this research site suggests a need for literacy support for some of the pupils. If pupils cannot read a text in a classroom situation, they are unlikely to be able to read at home. The Biology teacher comments on the source of her chosen classroom text:

> I've often used this particular book, but not the way I'm using it now. I've used it in so far as I might read a little extract, if it's particularly interesting about a particular chromosome or that, but, er, I've never got them to engage directly with it and it is interesting to see how they react to something that isn't a prescribed text. And I'm surprised how well some of them are able to cope with it. (Biology teacher, conversation 2)

The Biology teacher seems to assume that pupils would be able to understand a book when they are listening to her reading it out loud to the whole class, but not necessarily when pupils are reading it for themselves individually. The Biology teacher expressed a hope that some of the pupils, whom she knew were "readers" might be interested to read "something that's not fiction, for a change, you know, because you can find some fascinating scientific works" (Biology teacher, conversation 2). Extended written texts are a source of academic lexis, in context, and can be models of academic genres,

> Complex texts provide school-age learners reliable access to this language, and interacting with such texts allows them to discover how academic language works. (Wong Fillmore and Fillmore 2012, p.65)

The perspective of language use as meaning making within a social context, fundamental to systemic functional linguistics, exposes inauthenticity as a source of confusion; this is demonstrated by the second Religion classroom text (pp.155-156) as well as the postcard text in the Religion examination rubric (p.150). So, careful selection of reading texts is important, especially for pupils who are still developing more basic levels of literacy. Reading material should represent a recognizable genre and so provide the associated clues for meaning which support the reader's comprehension.

This particular cohort of transition year pupils was repeatedly reported as unusually reticent. Among other issues, this suggests a need for training the pupils in performing spoken texts, such as making a contribution during a class discussion. I used this principle at the beginning of focus discussion groups with these pupils (pp.129-130), with the result that every pupil spoke. Reticence may be caused by

unfamiliarity with spoken genres and consequent lack of confidence to speak. In other words, pupils may have ideas they would like to express orally in class, but not know how they should formulate their potential contributions. The instance of P46 writing "D' end" (p.165) at the end of his written text may illustrate this principle in the written mode; P46 wanted to mark the end of his work, but did not know an appropriate formulation of academic English with which to do this. Genre-based academic English development would address these issues and empower pupils to ask for clarifications about how to use language for learning.

Intervention 2

Intervention 2 was designed to explore the development of academic English at the level of the sentence. The TACS activity, of the original guidelines, is intended to bring pupils into their zone of proximal development, irrespective of their mother tongue (pp.110-112). The pupils, in general, did not perceive intervention 2 as having much educational value, whether they enjoyed the miming and calling out or not. Some pupils understood that this activity was activating their knowledge of syntax (p.183; p.184), but mostly the pupils saw it as a novel, but time-consuming way of memorizing sentences. The teachers rejected the idea of using TACS to introduce content, but embraced the miming activity for the purpose of reinforcement or revision of concepts and language already familiar to the pupils. The teachers tended to focus on the level of lexis, rather than grammatical features of academic English at the level of the sentence. Consequently the revised teachers' guidelines, influenced by the pupils' and teachers' reactions and approved by the teachers, have quite different aims to the original guidelines (see appendix 6, p.297).

The level of linguistic processing involved in the Charades-like activity is dependent on the sentence prescribed for miming. For optimum exploitation of this aspect, the sentence should include features of academic English, for example: complex noun phrases, such as "Unrealistic images in the media", content bearing verbs, such as "pressurize" and patterns of collocation, such as "conform to stereotypes". The sentence "There are five major world religions" (see p.202) does not exploit this aspect of the miming activity. The aim of activating each pupil's prior knowledge to

support the pupil in making connections with a new topic area cannot be achieved when no new concepts are introduced. The participant teachers were convinced that the miming activity would be unsuccessful if the prescribed sentence contained words which were unfamiliar to the pupils; this is why they preferred to use this activity for revision or reinforcement purposes. However, it may be that one or more pupils in a class would know the new word, for example "conform" in the case of the Religion TACS lesson, and could supply it for the rest of the class. Even if the class do not produce one or two of the prescribed words, the activity may create the desire to know those words, which the teacher can satisfy, and the activity will also activate pupils' prior knowledge and produce relevant associated lexis as a by-product.

Both of the teachers intended to incorporate miming activities into their teaching as a result of implementing intervention 2, perceiving mime as a useful pedagogical tool (pp.187-189). This suggests implications for training. Pupils may respond more readily to miming activities, both in the role of performer and the role of audience, if they have been prepared through explicit instruction. Teachers may also be more inclined to use this technique after receiving some instruction. The Charades-type activity involves the performer (the teacher in TACS and pupils in group work) using their whole body to communicate and also involves emotions such as frustration, when the mime and/or guessing is difficult, and satisfaction when a correct guess is made. Mime and guessing are identified as interesting by pupils. These aspects of the activity also created a light-hearted atmosphere in the classroom, while the pupils did not expect the teachers to be accomplished actors. This kind of performative teaching and learning activity can promote collaborative relationships of power between teachers and pupils, and between pupils.

Intervention 3

Intervention 3 was designed to explore the development of academic English at the level of lexis and was discussed with the teachers during conversation 6. Intervention 3 was not implemented in the classroom during this study, so there are no comments from pupils about it. The Biology teacher explains how intervention 3 directly addresses a popular type of examination question in Biology (p.190) and that she

already asks pupils for their ideas in a similar, but much less time-consuming manner than intervention 3. This observation highlights a lack of appreciation of the rationale behind intervention 3. Firstly, it is intended to address lexical issues which the teacher anticipates will be particularly challenging for pupils or which are already problematic for pupils, thus justifying a substantial allocation of class time. Secondly, the structured process of intervention 3 creates a situation in which every pupil is forced to manipulate challenging academic language, with the opportunity of negotiating meaning with their peers, or asking for help from the teacher. Thirdly, intervention 3 represents an example of an instance when academic language is explicitly developed in the classroom and acknowledged as integral to content learning. Fourthly, the linguistic discussion generated may afford EAL pupils the opportunity to be the "expert" who helps their classmates access their zones of proximal development. EAL pupils are likely to be more familiar with linguistic meta-language than their native English-speaking peers and to have an awareness of how they use English, which native speaking children would probably not have. The teacher might not have this awareness either. Lyons and Little quote a language support teacher: "Some of the newcomer students actually know more than I do about a present participle, for example" (Lyons and Little 2009, p.42). Planned academic English development activities such as intervention 3 might elicit solutions from EAL pupils with a linguistic perspective quite different from the other pupils' suggestions. From the context of bilingual education, Cummins characterizes "empowerment . . . as the collaborative creation of power" (Cummins 2000, p.246) (see pp.44-45). Teachers can facilitate empowerment by offering pupils a more active role in the classroom, valuing their contributions and developing their metacognition and the necessary associated meta-language. However, teachers need to know about language, particularly the academic English of their subject, to guide the academic English development of their pupils.

Another aspect of intervention 3, relevant to any classroom activities which involve dyads or small groups, is the noise which can be generated while the pupils are busy with the activity. Organising classes into groups for collaborative discussion, for example fifteen pairs or ten groups of three, has the aim that fifteen or ten pupils respectively may be speaking at any one time during the group activity. This sort of noise is highly valued in the language as subject classroom, if it is target language

speech, as it is evidence of oral practice. However, some pupils may not be comfortable with a noisy classroom (P15, p.186) and may associate it with a lack of discipline. Outside of language as subject classes, some teachers may perceive a high noise level as indicative of a lack of control or find it intimidating. As pupils and teachers become used to relatively high noise levels during classroom activities, they may become more comfortable and perceive noise as evidence of work being done and consequent learning. In this research site the teachers welcomed the prospect of noise, given the general reticence of the pupils in class (p.181).

Lack of linguistic awareness

> in order for teachers to help their pupils become aware of the link between language and learning, it is necessary that they themselves become conscious of that as well (Bier 2015, p.79)

The teacher participants of this study were clearly well acquainted with their pupils and concerned to help each individual. However, their teaching lacked the linguistic dimension, with which to support and extend their pupils' learning. Teacher education in academic English development is needed to equip teachers to appreciate each pupil's linguistic strengths, weaknesses, and preferences. Identifying and encouraging the contributions different pupils can make, promotes collaborative relations of power within the pupil-teacher relationship (see pp.44-45), fosters pupil confidence and works towards distributing successful learner identities to all pupils (see pp.74-75; p.78). Considering the language dimension of learning highlights how knowledge is communicated (spoken and written about) and understood (heard and read). The "help" which brings a pupil to the boundary of their zone of proximal development may be a diagram, or written language in a book, it may be the spoken English of the teacher heard during a plenary session, or the process of negotiating meaning with another pupil in order to write. The process of understanding, or clarifying understanding may involve speaking and writing, as learners have to choose their words and the structures in which they present them in order to express their knowledge. Subject-specific language forms indicate the ways of thinking characteristic of disciplines, so the form of the language itself may also constitute the "help" which extends understanding and development, for example the spoken genre of whole class discussion, as attempted in the first Religion research lesson.

Teachers need time to consider each of their pupils' progress, and possibly consult other teachers. The diversity of the contemporary post-primary classroom represents a challenge for lesson planning, involving multiple factors for consideration. There is no easy, one-size-fits-all formula to produce a lesson in which every pupil will learn. Aiming to position every pupil within their zone of proximal development involves time-consuming planning. There is a danger, especially when teachers are working under extreme time pressures, of mistakenly grouping quite different pupils together as having similar needs. For example, the native Spanish-speaking pupils, P21, P31 and P49, might appear to be a homogeneous sub-group within the cohort of participants, however, a superficial conversation about language skill preference revealed their very different approaches to learning and communicating (pp.207-209). The pupil participants of this study made it clear that they want lessons to be interesting. Pupils' observations that copying from the board or working through a worksheet on their own are boring classroom activities align with Vygotsky's assertion that it is pointless making learners practise what they can already do (Vygotsky 1986, p.189) (see p.87). So, pupils want activities that are both interesting and that they believe are helping them to learn. Pupils may respond positively to challenging classroom activities; they are unlikely to succeed at tasks their teachers do not expect them to achieve. Given the wide diversity of the pupil population, offering choices of activity may facilitate some degree of autonomy in learning and promote collaborative relations of power.

Academic English development teacher education is clearly needed. Linguistic diversity in the classroom proclaims Ireland's multilingualism and stands in the face of "Englishualism". Like a barium meal (see p.48), it reveals the need for explicit language development for all pupils, as a matter of social justice. The education system has not responded adequately to this need (pp.34-41). The government has not embraced the EU's ideal of plurilingualism (p.20). The current situation is pregnant with the potential for positively addressing both these issues: academic English development and plurilingualism, by approaching linguistic diversity, not as a problem to be ignored (pp.39-40) but as a valuable resource to be nurtured and developed to the benefit of all. This approach involves making the rationale, mechanics and benefits of academic English development explicit, particularly to

teachers and pupils, thus creating clarity and revealing the purpose of language work, where currently there may be ambiguity and indifference.

Chapter 9 – Conclusions and recommended actions

Academic English development has the potential to transform the Irish education system and by extension Irish society. The major barrier preventing this transformation is the lack of linguistic awareness at every level of the education system. Teachers are aware that they are not equipped to deal with the linguistic diversity of the current pupil population, however teachers appear not to be aware of the language dimension of subject teaching and so cannot currently integrate academic English development into their lessons as they do not possess the necessary linguistic awareness. Teachers and all the parties whose function it is to support learning: the DES, the SEC, the Teaching Council, teacher educators, textbook publishers and school management, must be made aware of the importance of academic English development. Teacher education must equip teachers to develop their pupils' academic English and the language dimension of subject assessment must be made explicit.

Raise linguistic awareness

Linguistic awareness in this context refers, in essence, to understanding the necessity for explicit academic English development in the classroom because of the inseparability of language and learning (p.42). Evidence of a lack of such awareness is found throughout this thesis. Rectifying this situation involves establishing the expectation that language learning is integral to subject learning, among teachers and pupils to promote learning and educational equity in the classroom, and at government level to implement academic English development. As recommended by M. A. K. Halliday, (see p.9) it is the job of applied linguists to elucidate this matter.

Educational linguists with pertinent specializations are needed to apply their expertise at different levels of the education system, to raise and develop linguistic awareness. Applied linguists specializing in post-primary assessment are needed at the State Examination Commission (see p.166). Applied linguists with teaching expertise are needed to educate teachers and equip them to, in turn, raise their pupils' linguistic awareness. Current teacher education providers may believe that they are already

addressing the issue of academic language, however they may not be adequately aware of the issues involved. Publishers need guidance from applied linguists to ensure, at the very least, that the texts they include in post-primary school textbooks provide good models of pertinent academic genres. However, applied linguists offering such services may not always be welcome. DES policymakers' levels of linguistic awareness are a matter for conjecture, but for whatever reason, economic or otherwise, educational policy does not acknowledge in real terms the importance of academic English development, mother tongue maintenance for EAL pupils, or the development of plurilingualism at school (pp.34-41). Instead policy reflects the attitude of "Englishualism", (pp.33-34) disregarding linguistic research findings and European directives. While government documents may appear to set out reasonable, considered policy, no investment is made to implement the recommendations they contain. For example language support teachers are required to share their expertise with subject teachers (p.31), although there is no provision to develop this expertise in the first place. Critics attack both inadequate funding for EAL (pp.36-37) and misallocation of funds (p.36). The measures recommended below require minimal funding to address all these language-related issues.

Teachers and teacher educators are regulated by the Teaching Council, which is under the aegis of the Department of Education and Skills, as is the State Examination Commission. "Englishualism" may filter down this hierarchy and be reflected in teacher attitudes to multilingualism (p.35), however there are already mechanisms in place which could be used to raise teachers' linguistic awareness, help them understand the benefits of academic English development, appreciate the greater challenges faced by EAL and linguistically disadvantaged pupils more clearly, and equip them to address these issues and promote plurilingualism through their teaching. There are already initial teacher education courses, both undergraduate and post-graduate being offered at various institutions in Ireland, which are regulated by the Teaching Council. All post-primary teachers in Ireland are required to register with the Teaching Council every year. The Teaching Council could play a significant role in the implementation of teacher education programmes, both initial teacher education and continuing professional development for serving teachers.

The hierarchy of educational bodies in Ireland
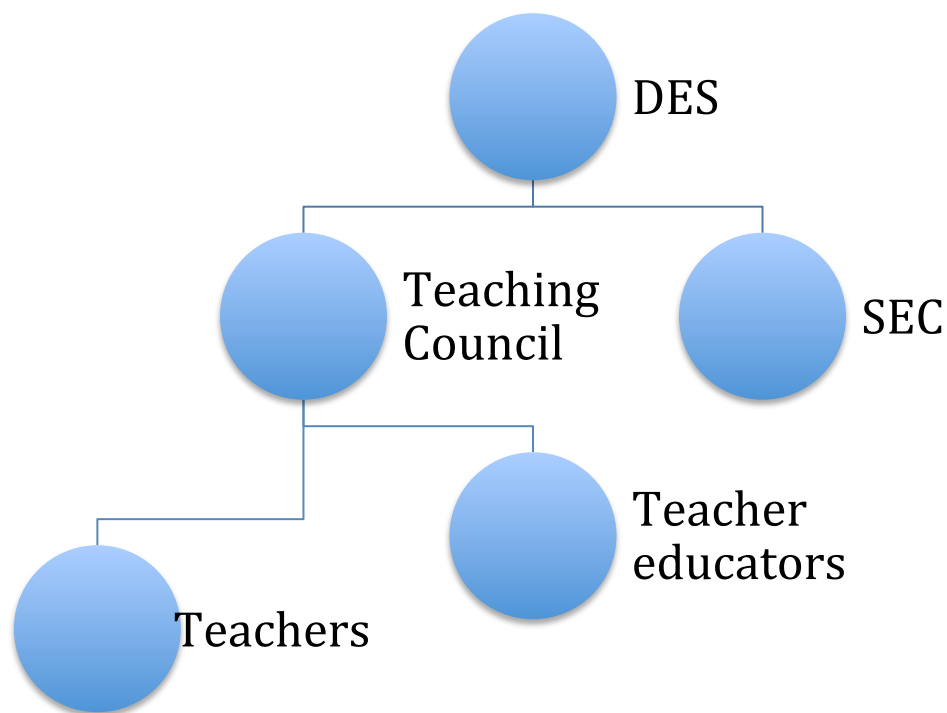
The findings of this project suggest that providing teachers with materials designed to develop academic English is not a solution without the foundation of teacher education to transform teachers' understanding of the role of language in learning. Thus teacher education is a fundamental requirement to answer the main research question of this project: How can academic English development be integrated into mainstream curriculum lessons to the benefit of all pupils in a multilingual post-primary context?

Educate teachers

Teachers need to know about the academic English of their subject. This includes the spoken and written genres used within their discipline, which reflect disciplinary ways of thinking, the spoken and written genres used within their subject classroom for learning and which are required for examinations. It includes the grammatical

characteristics of these genres and the meta-language necessary to discuss linguistic notions, structures and patterns, including lexical patterns. Teachers need to be able to explain to their pupils the rationale behind academic language development activities and develop pupils' expectation of linguistic support. Teachers need to be able to recognize linguistic issues and answer pupils' questions as they occur spontaneously during a lesson. Some classroom management direction is implied in facilitating spoken genre development, such as group formation and fluidity. Teachers need to be able to discuss academic English development with teachers of other subjects. Adequate teacher education in this area will bring teachers to a level of competence inspiring the desire to include inter-language comparisons and thus promote plurilingualism through their teaching.

The infrastructure for educating trainee and serving teachers is already in place. A module on academic English development should be a required element of every teacher education programme in Ireland. Current initial teacher education programmes involve teaching practice placements in schools. If a module on academic English development was part of initial teacher education, placement classrooms could provide trainee teachers with ideal contexts in which to explore and apply their developing knowledge of academic English features specific to their subject(s). Such a module could also address specific EAL issues and equip trainee teachers to promote plurilingualism.

Serving teachers are entitled to continuing professional development and may welcome practical support to meet the challenges of multilingualism in their classrooms. They could simultaneously gain the greater linguistic awareness they will need to take full advantage of the linguistic guidelines for public examinations, which should be issued by the SEC. This continuing professional development could expediently be achieved in groups of subject teachers (for example Religion teachers) or subject domain teachers (for example social science teachers) in workshops offered to schools within localities. Teachers' unions and subject teacher associations are other potential channels for linguistic awareness raising, development and support for teachers, for example through online fora. To summarize, academic English development teacher education requires suitable educational linguists and only minor

funding to be implemented as part of DES policy; the infrastructure is already in place.

The State Examination Commission

The SEC should scrutinize the language dimension of their examinations, making rubrics consistent and explicit, so that the examination questions are comprehensible for candidates and so that teachers know how to prepare their pupils from the linguistic perspective. Unnecessarily complex question forms (see p.149) should not be included in examination papers. Instructions should be explicit, not implied (see pp.151-152). For each subject assessed through public examinations, the SEC should identify the language proficiency being assessed as well as the subject content knowledge, for inclusion in freely available examination course syllabi. For example, in Biology, the SEC might stipulate that candidates need to be familiar with the passive voice in the past simple tense. The *EAL Post-Primary Assessment Kit* (see p.28) is divided into four parts, one for each of the four language skills: reading, writing, listening and speaking. The SEC should consider the implications of this for public examination syllabi.

Publishers

Syllabus guidelines issued by the SEC will also benefit publishers of post-primary school textbooks intended to be used to prepare pupils for public examinations. Textbooks may be designed to explicitly include linguistic aspects of learning, which would support teachers in their own linguistic awareness development, as well as benefiting pupils. Publishers should avoid including confusing inauthentic texts such as the second Religion text in this project (see appendix 2, p.290).

The benefits for pupils

The language dimension of learning and assessment becomes explicit

Multiple benefits for pupils derive from raising the linguistic awareness of teachers through teacher education, making the linguistic aspect of SEC assessment explicit and incorporating the linguistic perspective of learning into textbooks as described above. Pupils' linguistic awareness develops through language sensitive teaching, the aim of academic English development teacher education. While academic English development needs to be explicit, it is an integral feature of subject teaching, not a subject that stands alone. It should feature in lesson plans when teachers identify linguistic issues for which pupils may need support or when textbooks incorporating academic English aspects of subject learning include useful sections on linguistic development. Academic English issues should also be addressed spontaneously during lessons, whenever opportunities arise. Pupils are more likely to respond to academic English development if they perceive it as relevant. For example, in the current examination driven post-primary system, pupils are likely to be interested in how academic English use in examinations will enhance their results. Seeing the linguistic dimension of examination syllabi would encourage pupils to engage with academic English instruction. Less pragmatic, but potentially equally engaging, is learning ways in which their mother tongue differs from their classmate's mother tongue and the cultural values those differences may reveal. Raising pupils' linguistic awareness may be a slow process, which happens gradually through consistent language sensitive teaching, but it may also involve moments of realisation, facilitated through classroom discussion. Explicit reference to grammar and genre can show pupils how linguistic aspects, other than lexis, are important for advancing their ability to understand, discuss and express their subject knowledge and to participate in disciplinary discourses. Successfully raising pupils' linguistic awareness leads to the general expectation of academic English development as an explicit and integral part of subject lessons and examination preparation.

To facilitate linguistic discussion in the classroom, academic English development involves acquiring linguistic meta-language. The data from this study indicates that

linguistic meta-language is not used at school by the participants (see p.206). For example, I refrained from using the term "collocation", discussing the phrase "conform to stereotype" in pupil focus groups 1 and 2, or in discussion with the teachers, because I was not confident the pupils or teachers would know the term (see p.179). Academic English development teacher education should ensure that teachers are equipped to discuss language, particularly in their classrooms with their pupils. This might involve naming and clarifying linguistic concepts as they arise during lessons. For example the linguistic concept of collocation in the context of a word which is new to the pupils, which collocates with a word with which they are familiar, such as the unfamiliar "conform" with the known "stereotype" in the phrase "conform to stereotype". This would be a natural scenario to refer to "to" as the required preposition in this phrase, if pupils were already familiar with the term "preposition". "Collocate" and "preposition" were not used during the Religion research lesson implementing intervention 2, probably because the participants were not familiar with this linguistic meta-language or such linguistic discussion. This is part of the academic English of academic English and supports learning about language. Raising pupils' linguistic awareness involves empowering them to discuss language using meta-language. Thus their academic English development and their subject content learning becomes explicit.

Academic English development promotes plurilingualism

Linguistic discussion in the classroom creates opportunities to make connections between languages: EAL pupils' mother tongues, as well as other languages learned at school, including Irish. EAL pupils are a valuable linguistic resource in the classroom and should be encouraged to ask about or indicate differences between their mother tongue and English, as they arise; this would serve to promote linguistic awareness among the whole class, while providing the opportunity for clarification of difficult concepts and their associated academic language. All teachers, not just language as subject teachers, should allow class time for comparisons to be drawn between languages: grammatical and conceptual as well as lexical. Most post-primary teachers should be able to do this between Irish and English at least, as until recently they were required to have a high level of Irish (p.23). So, raising pupils'

awareness of the language aspect of learning, and developing their ability to discuss language can also promote plurilingualism, help pupils make cross-curricular connections and provide opportunities for EAL pupils' linguistic prowess to be acknowledged and valued. As the process of promoting plurilingualism through attention to EAL pupil class members' mother tongues develops, the lack of mother tongue maintenance provision will be highlighted and might be addressed, as a consequence.

Factors promoting plurilingualism in the post-primary classroom
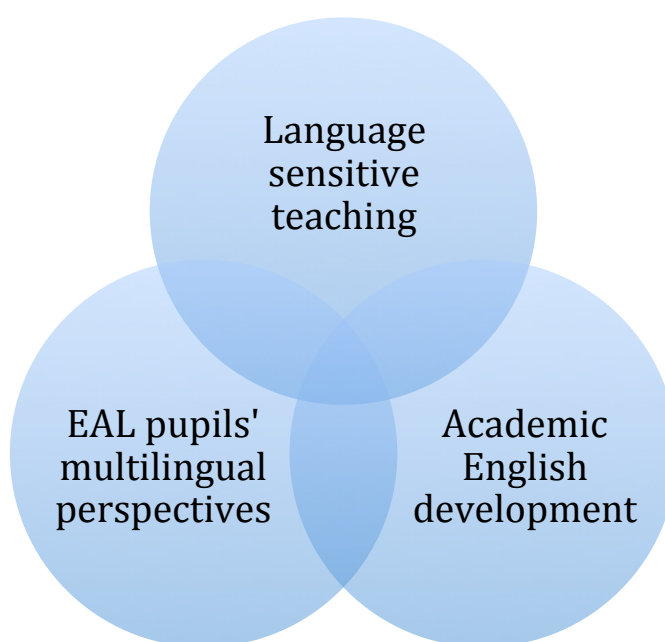
The transformational potential of academic English development

Applying the conclusions and recommended actions of this study would transform the whole education system of Ireland, not just the post-primary classroom. Pupils would be better prepared to enter third level education. Embracing linguistic diversity would advance Ireland towards the ideal of plurilingualism. Ireland's traditional bilingualism and current multilingualism could be harnessed and directed to support and develop the plurilingual competence of pupils and by extension all

members of society. This would address the issue of EAL provision and highlight the issue of mother tongue maintenance. Academic English development would expose the currently hidden curriculum of schooling and promote educational equity.

Recommended actions

1. Raise awareness of the importance of academic English development at each level of the education system:
   a. classroom
   b. staffroom
   c. school management
   d. subject teacher associations
   e. teacher unions
   f. The Teaching Council
   g. textbook publishers
   h. The State Examination Commission
   i. The Department of Education and Skills

2. Recognize the essential contribution of applied linguists in this area, to support all parties developing an explicit understanding of the language dimension of post-primary education in Ireland.

3. Require a module on academic English development in all initial teacher education courses in Ireland.

4. Support current teachers through subject-specific academic English development CPD programmes.

5. Establish CPD support for teachers facilitating autonomous and collaborative development, for example through online fora provided by subject teacher associations.

6. Require the State Examination Commission to issue syllabi explicitly identifying the linguistic knowledge and skills, as well as the subject knowledge, being assessed in each public examination.

7. Require publishers to explicitly feature the language dimension of subjects in textbooks and promote plurilingualism where appropriate.

8. Support the maintenance of all mother tongues spoken in Ireland.

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Appendix 1 - Principles of ethical research

> The Principle of Respect for the Individual extends as much to Social Science research as it does to Clinical Research. This Principle includes, *inter alia*, the requirements for *participant autonomy, properly informed consent obtained in writing, privacy, and beneficence or at least non-maleficence*. (University Research Ethics Board, University College Cork 2007, p.9, italics in the original)

This project comes under the responsibility of the Social Research Ethics Committee (SREC) of University College Cork (UCC), one of three committees, which report to the University Research Ethics Board of UCC. I was required to submit my protocol to SREC for ethical perusal and received some helpful guidance on a few concerns that the committee raised, as mentioned below. Reflecting upon the issues raised, modifying my research plan and written texts for participants in response, and resubmitting the revised proposal, was a valuable learning experience. Below, I address each of the four requirements mentioned as fundamental to the Principle of Respect for the Individual in the above quotation in relation to this project. I also refer to other research with children that I drew upon in designing this study.

Participant autonomy

It is important to ensure that no participant, either pupil or teacher, feels obliged to do anything related to the research study that they do not want to do. This is made explicit in the process of gaining consent and continues to be a priority throughout the data collection stage of the study. One issue concerning participant autonomy that the SREC expressed concern about was the possibility that if a school principal were to approach a teacher directly about participating in the study, particularly a teacher in a temporary position, the teacher might feel obliged to participate. Fortunately this was not an issue, as I was given access to all the transition year teachers myself, at their scheduled meeting, and so was able to very briefly explain the project and invite them to respond if they were interested. No other party approached them for this purpose.

The participant teachers exercised autonomy at each stage of the project. I provided them with initial guidelines for the classroom interventions, which they were free to implement however they saw fit, according to their teaching styles and their knowledge of the pupils. The guidelines were draft documents, intended from the start to facilitate the action research cycles of planning, action and reflection. The Religion teacher tended to adhere to the guidelines as closely as she thought feasible, in a spirit of exploration. The Biology teacher focused on certain aspects of the interventions which she found innovative, for example giving class time for reading a challenging text and using mime from the front of the class, and she devised lessons incorporating those activities, adapting or rejecting other suggestions from the guidelines. Nearing the end of the academic year, both teachers felt at liberty to point out that implementing intervention 3 (problem solving discussions in pairs, groups and the whole class) was not a realistic expectation in the time available, knowing all the other transition year activities the pupils had to complete.

From the perspective of the pupils, there are two significant aspects to participant autonomy in this project. Inclusivity is important, ensuring that every pupil is free to choose to participate as they wish. One pupil did not give consent for his written work to be copied, but participated in the research in every other way. One pupil chose not to participate at all in the study; he was still required to attend the research lessons if he was at school, as these lessons were regular subject lessons taught by the usual teacher. The second aspect: freedom to choose not to participate, for whatever reason, at any stage of the study is also very important. Participant pupils, that is pupils who had consented and granted some or all of the permissions associated with the research (see appendix 1, pp.270-272) were free to not write comments in their research notebook at the allocated times, and not to attend the focus discussion group to which they had been assigned, as they saw fit.

I view it as a positive and welcome feature that some pupils expressed negative attitudes about the classroom activities (for example see pp.195-196). This indicates that pupils felt at liberty to express their true opinions. All the pupils' contributions were made in a respectful manner, indicating mutual respect and I believe the pupils recognized that I was acting with the intention of doing good, whatever opinion they held of my project (see appendix 1, pp.281-286).

Inclusivity is an important principle for children-centred research, which may be highly valued by children. Leitch *et al* used Student Research Advisory Groups, whose members were randomly selected from pupils who had volunteered for this function "to obtain advice and counteract adult assumptions" (Leitch *et al* 2007, p.464). Pupils in these advisory groups expressed concern about inclusivity. Leitch *et al* report that the pupils not randomly picked immediately reacted with "why them and not us?" (Leitch *et al* 2007, p.467). Darbyshire *et al* asked primary age children to take photographs about physical activities over a week period as part of a multiple method project exploring childhood obesity in Australia. In the interest of "research fairness", they changed their budget allocations and pre-planned procedure of selecting a sub-sample of their focus group participants for this, when "children clamoured for cameras and were disappointed when they were not selected" (Darbyshire *et al* 2005, p.429).

Rudduck and Fielding point out that pupil "consultation assumes a degree of social confidence and of linguistic competence that not all students have" (2006, p.227). This problem is amplified for English language learners, not just making it more difficult for them to express themselves in the research context, but in the general classroom context every day at school. My project aims to give every pupil in a class an equal opportunity to express themselves, to comment on teaching techniques and express their attitude towards academic English. Thus all the 57 participating pupils, including four international pupils, were repeatedly invited to contribute to the research both through their written notebook entries, including through drawings if they preferred that to writing, and focus group participation. The pupils' and parents' information letter and consent form were translated into Spanish, German and Polish, the first languages of the international pupils of this transition year cohort.

Consent

UCC SREC requires that properly informed consent be obtained in writing from all participants, in my case from pupils and their parents or guardians about pupils' participation, and from teachers about teachers' participation. The teacher researchers readily signed their consent forms immediately after I explained the project to them individually. Gaining consent from the pupils, however, was much more challenging. I saw it as an important demonstration of my respect for the pupils that I waited until every pupil had returned their consent form before continuing to the next stage of the research. It was suggested to me that waiting for all the pupils' written consent was not necessary, especially as the project was being delayed because of it, however I regard this issue as fundamental to the integrity of the study and went to great lengths to meet this ethical requirement before proceeding, as explained below.

Different researchers have approached the matter of gaining consent in different ways. Researchers "on" children have looked for consent initially from parents, consulting the children once they have gained the care-giving adults' support. Others consider the children as the "key consent-core" (Fargas-Malet *et al* 2010, p.177) or the "critical consent-point" (Munford and Sanders 2004, p.473). Leitch *et al* report following the advice of their Student Research Advisory Groups in seeking pupil informed consent prior to parental permission, (Leitch *et al* 2007, p.464). Children-centred researchers aim to place children in the centre of the decision-making matrix over their participation and give them the critical decision over consent (Munford and Sanders 2004, p.473; White *et al* 2010, p.145).

Munford and Sanders, working in New Zealand, outline the four-step consent process they employed in their research project, which began in 1998, for which they needed to recruit three different groups of teenagers, aged 13-15, as well as their parents, to develop an understanding of the concept of well-being. They developed their four-step process in the context of "a particularly unsuccessful project in 1997" (Munford and Sanders 2004, p.474) when they had initially approached parents, asking them to involve their teenage children in the research, and encountered resistance from some

parents, some children and appeared to have fuelled family discord as a result of this approach, thus compromising their responsibility as researchers to do no harm. Learning from this experience, the four steps of their revised consent process are:

1. contacting the organization
2. informing parents that their children would attend a general presentation
3. presenting the project to young people and seeking consent to speak to their parents
4. contacting young people and their parents

"Informed consent should be freely given (without coercion, threat or persuasion) by children who can make an appropriately informed decision." (Fargas-Malet *et al* 2010, p.177). Research participants should be encouraged to expect respect, relevance, reciprocity and responsibility, the core principles of the British Columbia Aboriginal Capacity and Research Development Environment programmes in Canada, (see Ball 2005 cited by Veale 2005, p.31). For example, Munford and Sanders telephoned children who had voluntarily given them their telephone numbers and asked these potential children participants for permission to speak to their parents; this

> made explicit our view of them as competent and underscored our respect for them as individuals and our interest in hearing their views. (Munford and Sanders 2004, p.478)

The same ethical principles of respect, relevance, reciprocity and responsibility are upheld in my project. The consent process is similar, but works within the transition year programme, which includes visitors speaking about career paths pupils might take in the future, and uses a paper letter and consent form instead of the telephone. The four steps of the consent process in this project are:

1. contacting the school and being granted access to research in classrooms
2. finding at least one teacher who consents to participate in the research
3. presenting the project to transition year pupils at school and seeking consent through an information letter addressed to transition year pupils and their parents with an attached consent form
4. collecting the completed consent forms from the pupils at school

The consent forms are designed to be completed and signed by both the pupil and a parent or guardian (see appendix 1, pp. 270-272). Stage 4 of this process took longer than six weeks, during which time I visited the school twelve times to collect consent forms, provide new information letters and consent forms for pupils who had lost them, and generally encourage pupils to complete and return consent forms. After five weeks, the transition year coordinator allowed me access to the transition year class lists so that I could identify the pupils who had not yet returned their forms. I then handwrote notes to each of these pupils, providing a new copy of the information letter and consent form and my business card, asking them to return the consent form the next day.

Pupils' and parents' information letter and consent form

Dear Transition Year pupils and parents

I am studying ways of helping pupils develop academic English for a PhD at UCC. I am inviting the pupils of Transition Year classes at your school to take part in my research project. This means:

1) Allowing me to observe normal classes during the first half of this term.
2) Reading about some of the more difficult topics of your regular schoolwork as homework, and then discussing them during class time.
3) Next term, allowing me to video-record three of your normal lessons, which will include activities designed to help you develop academic language.
4) Taking part in small focus groups (30 minutes maximum each) to discuss these lessons (edited versions of the videos will be used in these focus groups to help you remember the lesson). These discussions will be audio-recorded.
5) Writing comments throughout the project in your own private research notebook.
6) Allowing me to analyse your written work and your test scripts.

Your attitudes

I am very interested in what you say and/or write about these classroom activities; I would like to know what you really think and how you really feel. If you find it difficult to express these things, I would like to help you and I will respect and value whatever you tell me.

Analysing your academic language

I will photocopy your regular written work and your test scripts, in the relevant subjects. I will use these copies to analyse your work and see if the academic language activities helped you with your writing. Your teacher will mark your work and tests in the usual way.

Consent and anonymity

I will only begin this research in your class if all the pupils and their parents give their overall consent. If you grant me permission to photocopy your work and then change your mind within two weeks of giving in a piece of your writing, I will destroy my copy and will not include it in my research data. If you consent to being video-recorded and then change your mind once the project has begun, you may sit out of view of the video cameras. You may grant or refuse permission for me to anonymously quote your comments during focus groups or from your research notebook. You may change your mind about your spoken or written comments up until two weeks after the final activity of the project, with no repercussions.

I will keep the research notebooks, copies of written work and test scripts, audio and video recordings from this project securely locked away, until I have completed my PhD; then I will destroy them. All the data I report will be anonymous. I will present the overall results of my study in my PhD thesis, and possibly in academic contexts such as journal articles and conferences. You, your teachers and your school will not be identified at any time.

If you need any further information, please contact me on 087 6178065 or mandy.collins@umail.ucc.ie. Please complete the attached consent form, secure it with the sticky label to keep it private and return it to your class teacher (the copy on the other side of this letter is for you).

Yours sincerely

Research Study of Academic Language Support

Pupil and Parents' Consent Form   **Pupil and parents' copy**

I …………………………………………………… (pupil's name) agree to participate in Mandy Collins' research study.

I am participating voluntarily.

The purpose of this study and what it means to take part in it over the next two terms, has been explained to me in writing.

I grant Mandy Collins permission to photocopy my written work and test scripts so that she can analyse my writing, as part of this research (**cross this section out if you do not grant this permission**).

I grant Mandy Collins permission to quote anonymously any comments I write in my research notebook (**cross this section out if you do not grant this permission**).

I grant Mandy Collins permission to video-record three lessons. I understand that only people present in the classroom when the video-recording is made will be allowed to watch the video-recording (in shortened form) during focus discussion groups (**cross this section out if you do not grant this permission**).

I grant Mandy Collins permission to quote anonymously any comments I make in focus discussion groups (**cross this section out if you do not grant this permission**).

I understand that Mandy Collins will keep my research notebook, copies of my written work and test scripts, and the video and audio recordings of my class securely until she has finished her PhD and that she will then destroy all this data.

I understand that all results will be reported anonymously.

I understand that I can withdraw my consent for Mandy Collins to analyse my writing within two weeks of giving the writing to my teacher, and my consent for my comments to be quoted up until two weeks after the final activity of the study, with no repercussions.

Signed ……………………………………………. (pupil)   Date ……………….

..……………………………………………………………………………………………

I ………………………………………………….. (parent or guardian) consent to my child participating in Mandy Collins' research study as detailed above.

The purpose and nature of the study has been explained to me in writing.

I understand that I can withdraw my consent up until two weeks after the final activity of the study, with no repercussions.

Signed ……………………………………………. (parent)   Date ……………….

Research Study of Academic Language Support

Pupil and Parents' Consent Form   **Researcher's copy**

I …………………………………………………… (pupil's name) agree to participate in Mandy Collins' research study.

I am participating voluntarily.

The purpose of this study and what it means to take part in it over the next two terms, has been explained to me in writing.

I grant Mandy Collins permission to photocopy my written work and test scripts so that she can analyse my writing, as part of this research (**cross this section out if you do not grant this permission**).

I grant Mandy Collins permission to quote anonymously any comments I write in my research notebook (**cross this section out if you do not grant this permission**).

I grant Mandy Collins permission to video-record three lessons. I understand that only people present in the classroom when the video-recording is made will be allowed to watch the video-recording (in shortened form) during focus discussion groups (**cross this section out if you do not grant this permission**).

I grant Mandy Collins permission to quote anonymously any comments I make in focus discussion groups (**cross this section out if you do not grant this permission**).

I understand that Mandy Collins will keep my research notebook, copies of my written work and test scripts, and the video and audio recordings of my class securely until she has finished her PhD and that she will then destroy all this data.

I understand that all results will be reported anonymously.

I understand that I can withdraw my consent for Mandy Collins to analyse my writing within two weeks of giving the writing to my teacher, and my consent for my comments to be quoted up until two weeks after the final activity of the study, with no repercussions.

Signed ……………………………………………. (pupil)   Date ………………

..…………………………………………………………………………………………………

I ………………………………………………….. (parent or guardian) consent to my child participating in Mandy Collins' research study as detailed above.

The purpose and nature of the study has been explained to me in writing.

I understand that I can withdraw my consent up until two weeks after the final activity of the study, with no repercussions.

Signed …………………………………………… (parent)   Date ………………

The initial information session for the pupils

There are many ways to explain research projects to children, or indeed potential adult participants; Fargas-Malet *et al* list information leaflets, tapes, letters, oral presentations and DVDs. I explained my project to the entire transition year cohort, in one school period, using a traditional lesson-like presentation, a quiz based on the information letter and consent form, and a short dramatic sketch performed by volunteer pupils. The session was designed to give pupils an insight into research as a possible future career path, using my project as an example, and then to go on to engage the pupils with the project and invite them to participate.

I began the presentation with an attempted brainstorming activity around "research", focused on the whiteboard. This was an overview which introduced the pupils to some complex concepts such as mixed method research, theory and ethics, as well as distinguishing between qualitative and quantitative research. I used my project as an example to explain these aspects of research, so as a consequence the pupils became familiar with features of my research design, such as my intention to video-record lessons. I took my Masters thesis, some academic journals and a conference booklet to show the pupils how research is disseminated. I distributed the information letter and consent form to everyone present, including to the EAL pupils in their mother tongue. We then had a brief quiz, which was designed to familiarize the pupils with the letter and consent form. Questions included: Where does the letter talk about ethics? Where does the letter talk about theory? (this was a trick question, because the letter does not include anything about theory). Was that last question ethical? Look at the consent form: how many decisions do you have to make? What are the five decisions? Who gets to see the video? By the end of the quiz all the pupils should at least have understood the basic content of the letter I had given them. It was one A4 sheet with writing on both sides and one A4 sheet with writing on just one side and an unused sticky label, all stapled together. The first side of writing was the information letter. On the other side of this sheet was a copy of the consent form with "Pupil and parents' copy" in the top right corner. The second sheet was the same consent form with "Researcher's copy" in the top right corner (see appendix 1,

p.272). I intended pupils to detach the second sheet, complete this copy for me, fold it up and secure it with the sticky label. The first sheet was for the participant pupil's parents to keep for later consultation, if required. I demonstrated how, after completing the researcher's copy of the consent form, they should return it folded up and secured with the sticky label. The final part of the information session was a short dramatic sketch. Two pupils volunteered to read the sketch, entitled "In Mandy's Dreams", (see pp.277-278) which presents two caricatures of the perfect pupil participants discussing how excited they are to be part of the study and handing their consent forms in the next day. The two pupils had a short time to rehearse, while I invited questions and passed around the MA thesis, journals and conference booklet for pupils to peruse. The volunteers then performed the sketch for the rest of their year group, which generated some laughter, to end the session.

Reflecting in my researcher diary afterwards, I concluded that I would probably give the same presentation again to that size of group in similar circumstances. The room resembled a small lecture theatre, with long fixed tables, arranged in raised rows; it would have been quite difficult to get all the pupils up and moving. I wrote that I had found the pupils attentive but quiet during the first part of the presentation, which was challenging as I was trying to elicit ideas around "research" from them. They were livelier during the quiz and enjoyed the dramatic sketch.

Clearly, the information letter and consent form are key elements in gaining consent from parents for their child to participate in the study, so the design is important. The consent form is arranged to facilitate the pupil choosing the different permissions they wish to grant and signing their consent first, before their parent then signs their agreement to whatever the child has indicated. In this way the pupil is invited to make their own choices about their participation, facilitating a child-centred decision-making process. The child can then discuss their choices with their parent, who has the final say in granting consent. This is consistent with children-centred research "with" children; research "on" children would be more likely to request consent directly from the parents.

Children-centred researchers are sensitive to the importance of presenting written texts for children in an appropriate form. Written material for children should use

child-friendly language to support accessibility, such as short sentences using high-frequency lexis and grammatical forms, and requests rather than commands. The presentation is also important. Leitch *et al* used their Student Research Advisory Groups to obtain very practical advice, for example to enlarge the font size and change the style of their draft information leaflet for pupils, to change the colour of the paper on which it was printed and to use more pupil-centred language (Leitch *et al* 2007, p.464). Diagrams, speech bubbles or pictures and large print are recommended (Fargas-Malet *et al* 2010; Barker and Weller 2003).

White *et al* used two separate letters, one addressed to the potential child participants and one addressed to their parents. Each was presented in a form appropriate to the intended audience. The parents' letter included the researchers' academic titles and full names, printed on official headed paper with contact details. The letter for the children (attending primary school) included the first names and photos of the researchers and was illustrated with cartoons; it stressed for the pupils "that their ideas and opinions were valuable and significant" (White *et al* 2010, p.145). Both letters were translated into the children's and parents/guardians' first languages including Polish, Russian and Spanish.

For this study I decided to use one letter, addressed to both pupils and parents. I believe this promotes the transparency of the study and demonstrates respect for the pupils, who are aged approximately 15 years old. The letter uses bullet points and headings to explain the purpose and nature of the project. It incorporates aspects that White *et al* separated and wrote in two different letters, into one document. Under the heading "Your attitudes" the letter explains my purpose in collecting data from pupils in a partial paraphrase of the project's research question 2:

> I am very interested in what you say and/or write about these classroom activities; I would like to know what you really think and how you really feel. If you find it difficult to express these things, I would like to help you and I will respect and value whatever you tell me.

The letter also includes my contact details with an invitation for parents and pupils to ask me for further information, if they wish. I wrote these texts with the pupils in mind, however, SREC doubted the capacity of fifteen-year-old pupils to understand some terminology used in my original information letter: "choosing difficult topics"

and "for linguistic analysis", so I revised the letter in the light of these recommendations.

It is important that the extent of participation demanded of the children be made explicit from the beginning (Coad and Evans 2008, p.42). As well as being provided with clear, explicit, accessible information about what involvement in the research project means, (Darbyshire *et al* 2005, p.421), both potential participant children and their parents must be given the power to exclude themselves/their children at the outset (Munford and Sanders 2004) as well as the children being allowed to opt out at any stage (White *et al* 2010, p.146). SREC recommended that I specify limits for opting out of the study and withdrawing permissions, so I revised my documents to set the limit of two weeks after the final activity of the study for withdrawal from the project altogether. I stated that both pupils and parents could exercise this right to withdraw, with no repercussions.

The result of this whole consent process was that from an original number of 60 transition year pupils, 57 consented to participate in the project, with the consent of their parents or guardians. One pupil did not want to participate in the project. One pupil moved to fifth year. One pupil left the school. Two of the 57 consenting pupils withheld some permissions: one did not want his written work copied or analysed and one did not want to be videoed or for focus group comments to be quoted.

Because of how the study developed, not all of the items included in the pupils and parents' information letter were actually necessary or exactly appropriate. For example, no tests were set for the transition year pupils in Biology or Religion that academic year, so I was not able to photocopy and analyse test scripts. However, no demands were made on the pupils that were not included in the letter and consent form. In a similar way, parts of the teachers' information letter also became inapplicable.

In Mandy's Dreams – dramatic sketch script

Characters	*Mary, a Transition Year student*
	Sean, a Transition Year student
	Chris, the student who has volunteered to collect the consent forms

Scene 1	*Walking home from school this afternoon*
Scene 2	*Arriving at school tomorrow morning*

Scene 1   ***Mary and Sean are walking home from school***

Mary   Oh go on, PLEASE carry my bag!

Sean   Give it here then. *(Takes Mary's bag)* Oh give me a break, there's nothing in it!

Mary   Yeah, I've already done my homework, but the letter from Mandy is in there. I wouldn't DREAM of forgetting that!

Sean   What did you think of all that stuff about research then? Wasn't it brilliant!!

Mary   Yeah! I can't believe we get to take part in some real research, AND it'll help us improve our school work!

Sean   Do you think everyone will agree to do it then?

Mary   WHAT? Pass up the chance to do all those FABULOUS research activities?

Sean   All that discussion!

Mary   Get videoed in class!

Sean   Write what we think in our very own research notebooks!

Mary   Have Mandy analyze our writing!

Mary & Sean together   WHAT MORE IS THERE TO LIFE?

Sean   See you tomorrow, so. *(Gives back Mary's bag)*

Mary   Bye.

Scene 2   *Arriving at school the next morning*

Sean   How's it going?

Mary   Great! How about you?

Sean   Well, my parents were so delighted when I told them about Mandy's research project, they decided to celebrate and we had a little party. Sorry I didn't invite you . . .

Mary   Oh, I was too busy trying to stop my Dad dancing on the table!

Sean   You've got your signed consent form, so.

Mary   Here it is *(Mary shows her consent form – it's folded long and thin)*

Sean   What did you do to it?

Mary   I just folded it up to preserve my privacy, like Mandy said. Didn't you use your sticker?

Sean   Urm . . . well . . . yeah . . . I . . *(Sean looks a bit embarrassed and shows his consent form – it's folded up really small)*

Mary   What's THAT?

Sean   Well, I was feeling really ETHICAL, so I just kept on folding!

Mary   Look, there's Chris. We can give them to Chris now – perfect!

Sean   Hi Chris. Here are our consent forms for you. *(Mary & Sean hand over their consent forms)*

Chris   Oh that's great! Yours are the last two. I've got them all now. Mandy'll be delighted!

Privacy

The assurance of privacy is a requirement of UCC's standards of ethical research and may serve to inspire confidence in the participants that no personal repercussions can result from their contributions. For example, the confidentiality of instruments of communication between pupil participants and me the researcher, such as research notebooks, supports pupils' freedom of expression. The intention is that pupils feel empowered to write whatever they want to in their research notebooks. In this situation, there is the unusual adult-child imbalance of power, in that the pupil can exercise power that the researcher cannot; while the notebook is in a pupil's possession they are at liberty to show their comments to others, but as the researcher I am not at liberty to disclose any individual's opinion.

One pupil exercised his right to privacy in a manner I had not openly invited or anticipated; P2 kept his research notebook at the end of the focus discussion group he attended, instead of returning it to me like the other focus group participants. On realising this, I did not feel I should ask P2 for the notebook, in case he preferred to retract it, but did not feel able to explicitly demand this right. I neither approached P2 about his research notebook, nor mentioned it to any other party. In this way I lost some valuable data but retained the ethical integrity of the project.

Consent forms contain pupils' decisions about granting or not granting permissions for the research. Because many of the consent forms were collected by a teacher, it was important to guard pupils' privacy, so that they did not feel obliged to consent in order to please a teacher. Weller's research site was the participants' school and questionnaires were administered by teachers during registration and tutor periods. Having identified confidentiality as a problematic issue within this context at the piloting stage, Weller provided sticky labels with which each child could seal their completed questionnaire. I used Weller's strategy of providing a sticky label in this project to protect the privacy of the pupils' and their parents' responses on the consent forms. I demonstrated for pupils how to use this sticky label and they also saw how they could be used during the short dramatic sketch at the end of the initial presentation to transition year. Most of the pupils (83%) used this sticky label.

Other instruments of research, which demanded privacy and integrity, were the video-recordings of research lessons implementing intervention 2. In this case I was safeguarding privacy within a group, rather than to each individual participant. The pupil and parents' consent form guaranteed that

> only people present in the classroom when the video-recording is made will be allowed to watch the video-recording (in shortened form) during focus discussion groups

This was a strategy to inspire confidence in both teachers and pupils. The strategy limits my use of the video-recordings to one purpose, for video-stimulated recall in pupil focus groups. Video is a very accessible research medium for pupils, and a powerful tool for revisiting a research lesson and eliciting attitudes and opinions about classroom activities. I believe my assurance of the privacy of each group of pupils who attended the video-recorded research lessons encouraged the participants to agree to be video-recorded, and so contributed to the rigour of the research.

Another side to privacy is anonymity, the assurance that findings from the research will be reported without identifying any of the participants. UCC SREC requires that anonymity be ensured in research with children. I stated this explicitly to the pupils when I addressed both transition year classes together at the beginning of the project, and reminded all participants, including the teachers, at every stage of data collection. Anonymity is achieved through not disclosing the identity or whereabouts of the school, using identifiers such as P60 for the pupils and job titles for the teachers.

UCC SREC also required that I declare how I would store data, how long I would keep it for and what would happen to it at the end of the project. This appeared in the information letters and consent forms, including the assurance that all pupils' research notebooks, copies of written work, audio and video-recordings, and audio-recordings of teachers would be destroyed once I had completed my PhD.

Beneficence

The fundamental principle that research must actively do good and do no harm underlies the basic motivation of this study and in particular my research methodology decisions and actions throughout the project. The requirement of beneficence also informs the decisions of gatekeepers such as school principals, transition year coordinators, teachers, parents and guardians of pupils. The pupils, children of approximately 15 years of age, are the most obviously "vulnerable" group of participants who need to be treated with "respect and sensitivity" (University Research Ethics Board, University College Cork 2007, p.9). Furthermore, the teachers must also gain from their experience of participating in the research project. The teachers made themselves vulnerable through welcoming me into their classrooms to observe lessons, and through purposefully departing from their usual teaching styles in order to explore classroom activities suggested by me. I believe the reason this study was successful in terms of beneficence was because of the mutual respect between all the active participants: pupils, teachers and me the researcher, reflecting the Principle of Respect for the Individual.

A second reason for this success is that the study is appropriate for transition year. The reflective nature of the research activities complement the underlying philosophy of this developmental period of schooling, by adding value and authenticity to the pupils' experience. In the context of a school year when they are encouraged to reflect on their own learning and other aspects of personal development, free from the pressures of examinations, this research project invites pupils to contribute to society, by giving their opinions on classroom activities and academic English. The two participant teachers clearly embrace the ethos of transition year and enjoy teaching in this context, therefore they welcomed the opportunity to participate. Because of their interest and openness to the study, the teachers became co-researchers and I believe gained some fresh pedagogical insights and so developed professionally as a result.

Setting up a research project involving contact with post-primary schoolchildren in Ireland requires demonstrating beneficence, or at least non-maleficence, at various levels. The first step is to obtain Garda clearance. This was complicated in my case,

because I have lived in multiple countries, some of which refuse to process applications for police searches, except under certain circumstances, (for example in Hong Kong the only circumstance is when intending to adopt a child). I had to have my fingerprints taken for some countries' applications and eventually I resorted to swearing an affidavit for the purpose of applying for Garda clearance, in view of insurmountable difficulties in obtaining police clearance from Peru, Hong Kong and India.

The next step is to find a school, or schools, with a principal and Board of Governors who are both supportive of the research project and willing to grant access to their school. Troman (1996) spent 5 months in England in the 1990s negotiating with many primary schools, hoping to conduct research in two schools using a comparative approach. However he only gained entry into one school and had to modify his research plans accordingly. He rationalises this "failure" in terms of the political, ideological, and policy contexts of England at the time, while acknowledging the significance of individual research skills such as being able to "sell" the research topic and make a good impression. Some of the wider issues Troman identifies may be applicable to the Irish context. For example, Troman recognizes the intensification of teachers' work as a result of policy changes as a barrier to gaining entry to schools. A prospective researcher may be seen as another drain on teachers' time, already overburdened by new duties. A researcher wishing to observe teachers at work may be associated with school inspectors, with a reputation for being critical and writing unwelcome and damaging, negative reports, or their research may be seen as irrelevant. Staff may feel that their school is already saturated with researchers and/or student teachers as well as having other perceived barriers to new research projects gaining access to the school. One of the conclusions of my Masters thesis, concerning research in Irish schools, included the observation:

> it seems that there are no incentives for schools to welcome researchers and that most teachers are so busy that they do not have any spare time at work for 'extras' such as being consulted by unknown MA students. (Collins 2009, p.52)

Ethical guidance from UCC requires that schools be approached via their principals, as they bear the responsibility of assuring the beneficence of the research. The school management must be confident, at the very least, that the researcher's presence in the classroom and in the school will do no harm. If they can see some immediate benefit

to the pupils and/or teachers they may be more likely to grant access. I wrote to the principals of multiple schools in Munster, asking them to bring my project before their Board of Management for approval. To address the issue of beneficence, my letter explained:

> Benefits for the participating pupils include: raised awareness of the importance of academic language for success at school, the opportunity to reflect on their learning processes, including collaboration with peers, and having their opinions heard, noted and acted upon. Participating teachers will gain opportunities to discuss language issues relating to the challenge of a small minority of English language learning pupils typical of today's mainstream classroom, to explore classroom interventions designed as language support for all pupils and to contribute to the outcome of the study.

This was a period of economic cutbacks and consequent increase of workload on school staff and the responses I received were indicative of this background setting. One principal initially responded by telephone on a Sunday evening and later regretted being unable to prioritize my project due to being "so snowed under" (researcher diary notes, 11.9.2011 and 4.10.2011). One principal simply responded by email to say "unfortunately we are unable to offer you an opportunity to do research work in [the school] during the next academic year". After making initial contact by letter, and then following this up by telephone and/or email, I felt I had achieved some progress when a school re-directed me to their transition year coordinator or head of fourth year, as this showed that the top management had accepted the project in principle, despite its potential extra burden on staff.

Munford and Sanders link successfully gaining access to a research site involving children with researchers' ability to "construct strong relationships with all stakeholders", given the "inevitability of adult involvement" (Munford and Sanders 2004, pp.479-480). Sending a brief but informative letter to principals as the first contact with a potential research site school and having a well prepared, brief, clear presentation about the project, initially for the principal and/or transition year coordinator, and later for the teachers was important for gaining entry into the school. However, there were circumstances and wider issues beyond my control that acted as barriers to entry. The increased workload on school staff as a result of cuts in government funding had a significant effect in blocking my access to teachers. Some teachers, whom I never met, might not have perceived my project in the same light as their managers and might have found participation in the project to be worthwhile

and interesting, as I intended it to be. The project was designed to be flexible, to fit in with the unpredictable nature of transition year, and to make minimal burdensome demands on teachers or pupils.

Gaining access to transition year teachers, was the next challenging step. As explained above, middle management tended to stress that their staff were already extremely busy and that it was not fair "to ask anyone to do anything else extra" (researcher diary notes, 3.10.2011). In one school the head of fourth year told me by way of explanation that they had "had a big cut in EAL staff, from three [full-time teachers] to just a few hours" (researcher diary notes, 30.9 2011). In the school which became my research site, the transition year coordinator "couldn't really see how it would work" and saw the project as a "big ask for teachers" (researcher diary notes, 28.9.2011), however he allowed me five minutes to address the upcoming transition year staff meeting and was very helpful and accommodating over the following academic year, as the study progressed. This was the only school in which I gained access to the entire transition year teaching staff.

Two teachers, from approximately twenty who attended this transition year staff meeting, expressed willingness to participate in the research: the Biology teacher and an English teacher. Unfortunately the English teacher found it too difficult to plan to implement intervention 1 with the transition year pupils because "she sees them so erratically" (researcher diary notes, 13.12.2011); consequently she eventually decided not to participate in the research. It was not until nearly all the pupils' consent forms had been returned that the Religion teacher came forward to participate in the study. The Biology teacher had signed her teachers' consent form on 10.10.2011; the Religion teacher signed her teachers' consent form on 29.11.2011.

The final step in gaining access to the research site of the post-primary classroom was obtaining consent from the children and their parents or guardians (see appendix 1, pp.267-269). Even with careful reflection on the form and content of the information letter and consent form for pupils and parents/guardians, I needed to revise my initial versions in the light of recommendations from UCC SREC. SREC required that I recognize and express in my information sheet that the research topic might be emotionally very difficult for pupils, especially if they are struggling.

> They may feel odd, different, not part of their class, ashamed, all difficult emotions to address in a research context (SREC, personal communication)

Discussing the popularity of introducing student voice into schools, Rudduck and Fielding recommend considering, among other questions, "who might feel . . . most at risk as a result of introducing student voice" (Rudduck and Fielding 2006, p.220). My project draws attention to the small minority of non-native English speaking pupils within a typical class. It is a real danger that these emergent bilingual/multilingual pupils, whom the study is intended to help, may feel singled-out. Veale warns about the possible effect of identifying a particular group of "vulnerable" children within a larger milieu: creating social categories in the perception of others, which may "separate out" previously integrated children from their peers (Veale 2006, p.28). She is also concerned about how participation in a research project may cause tensions for first generation immigrant children at home, if that participation is seen as undermining the position of parents and elders. In view of these issues, I gave careful thought to the design of research procedures and wording of research texts, to emphasise the main objective of helping all pupils in the multilingual setting.

White *et al* mention that their project exploring the experiences of migrant children in Ireland, conducted in 3 primary schools, was shaped by its location in a school environment (White *et al* 2010, p.149). The migration theme was not foregrounded, once consent had been obtained, and the migrant primary school children were not separated out from their classes (White *et al* 2010, p.145). In my study, the only research contexts where EAL pupils were treated differently from their classmates was that they were given the initial information letter and consent form in their native language and in focus discussion groups their perspectives as multilingual pupils were highly valued.

When researching sensitive issues with children, such as sexual health or parental separation/divorce, which might elicit strong emotional reactions from the participants, various precautions are recommended, such as having a co-leader present to watch for signs of distress among the children, and conducting debriefing sessions (Gibson 2007, pp.481-2). However, for this project, I felt it unlikely that the

topic would cause distress and deemed it sufficient to reiterate in the introduction to each discussion group that the pupils could retract anything that they said and reminded them of the guarantee of anonymity. The only signs of discomfort or distress I perceived during the discussions were associated with being slightly nervous of the situation and therefore reticent, and the hunger pangs of pupils who had not eaten their lunch before the group meeting began, (all the focus groups were held during lunchtime). The hunger problem was easily solved, by allowing pupils to eat their packed lunches during the focus group.

The principle of beneficence underlies and permeates the entire project, particularly the period of data collection in school. Despite the significant challenges of gaining access to the site of research, I enjoyed working with the participants and I believe they may have enjoyed it too, and at least have felt that we were working together towards doing something good.

Appendix 2 – Classroom texts

Biology classroom text

tried hard to use the bare minimum of technical terms in this book, but some are unavoidable.

The human body contains approximately 100 trillion (million million) CELLS, most of which are less than a tenth of a millimetre across. Inside each cell there is a black blob called a NUCLEUS. Inside the nucleus are two complete sets of the human GENOME (except in egg cells and sperm cells, which have one copy each, and red blood cells, which have none). One set of the genome came from the mother and one from the father. In principle, each set includes the same 60,000–80,000 GENES on the same twenty-three CHROMOSOMES. In practice, there are often small and subtle differences between the paternal and maternal versions of each gene, differences that account for blue eyes or brown, for example. When we breed, we pass on one complete set, but only after swapping bits of the paternal and maternal chromosomes in a procedure known as RECOMBINATION.

Imagine that the genome is a book.

There are twenty-three chapters, called CHROMOSOMES.
Each chapter contains several thousand stories, called GENES.
Each story is made up of paragraphs, called EXONS, which are interrupted by advertisements called INTRONS.
Each paragraph is made up of words, called CODONS.
Each word is written in letters called BASES.

There are one billion words in the book, which makes it longer than 5,000 volumes the size of this one, or as long as 800 Bibles. If I read the genome out to you at the rate of one word per second for eight hours a day, it would take me a century. If I wrote out the human genome, one letter per millimetre, my text would be as long as the River Danube. This is a gigantic document, an immense book, a recipe of extravagant length, and it all fits inside the microscopic nucleus of a tiny cell that fits easily upon the head of a pin. The idea of the genome as a book is not, strictly speaking, even a metaphor. It is literally true. A book is a piece of digital information,

written in linear, one-dimensional and one-directional form and defined by a code that transliterates a small alphabet of signs into a large lexicon of meanings through the order of their groupings. So is a genome. The only complication is that all English books read from left to right, whereas some parts of the genome read from left to right, and some from right to left, though never both at the same time.

(Incidentally, you will not find the tired word 'blueprint' in this book, after this paragraph, for three reasons. First, only architects and engineers use blueprints and even they are giving them up in the computer age, whereas we all use books. Second, blueprints are very bad analogies for genes. Blueprints are two-dimensional maps, not one-dimensional digital codes. Third, blueprints are too literal for genetics, because each part of a blueprint makes an equivalent part of the machine or building; each sentence of a recipe book does not make a different mouthful of cake.)

Whereas English books are written in words of variable length using twenty-six letters, genomes are written entirely in three-letter words, using only four letters: A, C, G and T (which stand for adenine, cytosine, guanine and thymine). And instead of being written on flat pages, they are written on long chains of sugar and phosphate called DNA molecules to which the bases are attached as side rungs. Each chromosome is one pair of (very) long DNA molecules.

The genome is a very clever book, because in the right conditions it can both photocopy itself and read itself. The photocopying is known as REPLICATION, and the reading as TRANSLATION. Replication works because of an ingenious property of the four bases: A likes to pair with T, and G with C. So a single strand of DNA can copy itself by assembling a complementary strand with Ts opposite all the As, As opposite all the Ts, Cs opposite all the Gs and Gs opposite all the Cs. In fact, the usual state of DNA is the famous DOUBLE HELIX of the original strand and its complementary pair intertwined.

To make a copy of the complementary strand therefore brings

back the original text. So the sequence ACGT become TGCA in the copy, which transcribes back to ACGT in the copy of the copy. This enables DNA to replicate indefinitely, yet still contain the same information.

Translation is a little more complicated. First the text of a gene is TRANSCRIBED into a copy by the same base-pairing process, but this time the copy is made not of DNA but of RNA, a very slightly different chemical. RNA, too, can carry a linear code and it uses the same letters as DNA except that it uses U, for uracil, in place of T. This RNA copy, called the MESSENGER RNA, is then edited by the excision of all introns and the splicing together of all exons (see above).

The messenger is then befriended by a microscopic machine called a RIBOSOME, itself made partly of RNA. The ribosome moves along the messenger, translating each three-letter codon in turn into one letter of a different alphabet, an alphabet of twenty different AMINO ACIDS, each brought by a different version of a molecule called TRANSFER RNA. Each amino acid is attached to the last to form a chain in the same order as the codons. When the whole message has been translated, the chain of amino acids folds itself up into a distinctive shape that depends on its sequence. It is now known as a PROTEIN.

Almost everything in the body, from hair to hormones, is either made of proteins or made by them. Every protein is a translated gene. In particular, the body's chemical reactions are catalysed by proteins known as ENZYMES. Even the processing, photocopying, error-correction and assembly of DNA and RNA molecules themselves – the replication and translation – are done with the help of proteins. Proteins are also responsible for switching genes on and off, by physically attaching themselves to PROMOTER and ENHANCER sequences near the start of a gene's text. Different genes are switched on in different parts of the body.

When genes are replicated, mistakes are sometimes made. A letter (base) is occasionally missed out or the wrong letter inserted. Whole sentences or paragraphs are sometimes duplicated, omitted or

reversed. This is known as MUTATION. Many mutations are neither harmful nor beneficial, for instance if they change one codon to another that has the same amino acid 'meaning': there are sixty-four different codons and only twenty amino acids, so many DNA 'words' share the same meaning. Human beings accumulate about one hundred mutations per generation, which may not seem much given that there are more than a million codons in the human genome, but in the wrong place even a single one can be fatal.

All rules have exceptions (including this one). Not all human genes are found on the twenty-three principal chromosomes; a few live inside little blobs called mitochondria and have probably done so ever since mitochondria were free-living bacteria. Not all genes are made of DNA: some viruses use RNA instead. Not all genes are recipes for proteins. Some genes are transcribed into RNA but not translated into protein; the RNA goes directly to work instead either as part of a ribosome or as a transfer RNA. Not all reactions are catalysed by proteins; a few are catalysed by RNA instead. Not every protein comes from a single gene; some are put together from several recipes. Not all of the sixty-four three-letter codons specifies an amino acid: three signify STOP commands instead. And finally, not all DNA spells out genes. Most of it is a jumble of repetitive or random sequences that is rarely or never transcribed: the so-called junk DNA.

That is all you need to know. The tour of the human genome can begin.

First Religion classroom text

The BIG Question

Why do young people try drugs?

Some well-known names share their personal experience of substance use.

Substance addiction was soul sickness, says Black.

Singer Frances Black, who has battled multiple addictions over many years, yesterday described addiction as 'soul sickness'.

Having overcome addiction to alcohol, amphetamines, sleeping tablets and slimming tablets, she said she has been on a most amazing journey of recovery.

'I can't believe sometimes I'm the woman I am to have the strength to come before you today and speak about this journey,' she told a conference on substance and alcohol misuse in Killarney.

The member of the famous singing family — now a qualified addiction counsellor who has worked in the Rutland Treatment Centre in Dublin — told how she started drinking at 13 by taking a bottle of Smithwick's beer.

'I had emptiness inside me and the drink that day filled the emptiness. I hadn't mixed well in school, had been extremely shy and quite isolated. But once I'd tasted alcohol I knew I always wanted more. The alcohol gave me great confidence,' she said.

However, despite being 'blown away' when informed she was an alcoholic, she later became addicted to slimming tablets, which she took for 10 years.

'At first, the slimming tablets gave me the best feeling ever, even better than cocaine, which I dabbled in. But I became so addicted to these tablets that I couldn't get out of bed in the morning without taking them,' she told 150 delegates at the South Kerry Life Education Getting a Grip conference, in the Brehon Hotel, Killarney.

Ms Black, who has made several successful albums, became suicidal and reached a stage in her alcoholism where she was drinking for the sake of drinking, without enjoying drink.

She said entering the Talbot Grove Treatment Centre, in Castleisland, Co Kerry, was one of the most difficult things she had ever done, but it changed her life.

She is now continuing with her singing career, and called for a foundation for people with addictions and felt there should be places for people who are feeling suicidal.

'Many kids are turning to drink, and suicide and alcohol are closely linked,' she said.

[Source: *The Irish Examiner*, 07 October 2006]

Link Up

See also *Module 2, Mental Health*

Second Religion classroom text

Paul McGrath

Paul McGrath is one of Ireland's best-loved sportsmen. His professional football career spanned over 14 years. He played for Ireland in the European Championship finals of 1988 and the World Cup finals of 1990 and 1994. But, behind the implied glamour of life in the employ of great English clubs like Manchester United and Aston Villa, McGrath wrestled with a range of destructive emotions that made his success in the game little short of miraculous.

'More than my knees had begun to slow me. I was a barely functioning alcoholic now addicted to tranquillisers. It had always been assumed that my drinking and my knees were parallel stories. To some extent they were. I had eight knee operations during my time with Manchester United, and often chose to dull the loneliness of rehabilitation with serious binges.

'But even playing the best football of my life at Aston Villa, I was still drawn towards the pursuit of oblivion. I didn't drink rationally. I drank to blackout. There was no pleasure in the social pint for me.'

He tells of overwhelming despair, 'I hated everything I had become.'

[Source: *Back from the Brink: The Autobiography* by Paul McGrath, Century, 2006

QUESTIONS

1. In your opinion do celebrities have a social responsibility to disclose their experiences of addiction?
2. Should such celebrities be considered good role models?
3. Do you think some celebrities deliberately seek the attention of being an addict or go to rehab for media attention?
4. If politicians have to stand down in public disgrace over drug use, then why not entertainers?

The road to recovery is by no means a straight one. Indeed in my case it's been a fai bumpy one as well. I've fallen off the wagon man but as of course like this shows, that's part of recovery process.

Paul McGrath talking at a course on addiction studies by the Addiction Training Institute, Dublin.

Appendix 3 – Intervention 1 original guidelines for teachers

<u>Pupils read about and then discuss a challenging topic</u> (Intervention 1)

Aims

- The students engage with the concepts of the topic and the language they need to express those concepts.
- The discussion is like a spoken rehearsal for the subsequent writing assignment.
- The class develop their understanding together.

This intervention is spread across two lessons:

- Lesson 1: Set homework to read about the topic.
- Lesson 2: Class discussion.

Please allow 5 minutes at the end of lesson 2 for the students to make an entry in their research notebooks.

Lesson 1: Set homework to read about the topic

- Name the topic with care (pupils may use your term to search the internet and non-native English speakers may look it up in a bilingual dictionary).

- Suggest texts for pupils to read, for example:
  - A section of their textbook.
  - Give them a copy of a helpful text.
  - A helpful starting point on the internet.

- (Give the eventual written assignment on the topic, if appropriate) explain that a class discussion in the following lesson will help them with their written assignment.

- Explain that the reading will prepare them for the class discussion and that it may help them to write down notes, difficulties and/or questions from their reading for the next lesson. Explain that you (the teacher) will not answer these questions during the discussion, but you will get a good idea of what they have understood and what they still need your help with, while they try to answer their questions for each other.

Lesson 2: Class discussion

- Allow 10-15 minutes of class time for the discussion so that it is not rushed.

- Prepare one discussion question, containing the central issue of the topic, (it may be the same as the written assignment question).

- Establish some discussion rules or guidelines, for example:

  o Respect: everyone should listen to what other people are saying; people should speak one at a time.

  o Honesty: everyone should say what he/she really thinks, even if it seems to be different from what other people have said already. It is acceptable to honestly say:
    - "I don't understand."
    - "I'm lost."
    - "I'm confused."
    - "Could someone explain that bit again please?"
    - "I can't see how this is going to help me write the assignment."

- A suggested framework for the discussion (adapted from J T Dillon, 1994):

  1. Write the discussion question up, say it and explain it.
  2. Ask the students to talk about:
     - What they know about the question.
     - What the question means to them.
  3. Keep attentive silence while the students contribute to the discussion; write notes on what is said; allow long pauses and encourage continued contributions through facial expressions and hand signals.
  4. Give a spoken summary of the points that the students have made.

- Other suggestions:

  o Ask for a show of hands about the discussion question, at the beginning:
    - "Who has already written the assignment?"
    - "Who thinks it looks easy enough?"
    - "Who thinks it will be difficult?"
    Then ask the students to elaborate on their individual reactions and to identify what goes in the answer together.
  o If you find it difficult to keep quiet during long pauses, recite a short poem or song in your head (taking about 10 seconds).
  o If it seems absolutely necessary to clarify a point, say "I'm not sure what we are saying", then let the students explain.
  o If it seems necessary to control the pace to include everyone, say "This may be going too fast; are we clear about what _____ means?"
  o Expect some dissatisfaction with the process, especially to start with.

Appendix 4 - Intervention 1 revised guidelines for teachers

For transition year classes

Read – small group discussion – whole class feedback – write in pairs

A teaching sequence to facilitate Transition Year students' engagement with challenging concepts and to support students' academic language acquisition, enabling them to express those concepts.

Read

Set a task, which gives the students a reason to read, for example:
- to write at least one question they would like answered on the topic of the text
- to identify unfamiliar words and phrases
Alternatively, give the students the title they will later write on in pairs.
Students should read material on the challenging topic, for example:
- an extract from a text book or article
- a helpful website on the topic, as a starting point on the internet.
Recommendations:
- Do the reading activity in one lesson and the writing activity in the next lesson.
- Allow students to ask each other questions (quietly) during the reading activity.

Small group discussion

Groups of approximately 4 students should attempt to answer some kind of discussion question together. The students should know beforehand that they are going to report to the rest of the class. One student in each group can be put in charge of the reporting. Example discussion questions:
- What previous knowledge does this topic build on (possibly from other subjects)?
- What makes this difficult to read and/or understand?
- What is interesting about the reading, and/or how is it relevant?
- The title students will write on in pairs.

Whole class feedback

Each group should report to the class. All contributions must be respected.

Write in pairs

Each pair should work together to produce one piece of writing.
If there are two EAL students with the same mother tongue working together, they should be allowed to use their first language while they are collaborating to produce written English.

For transition year classes, with rationale

Read – small group discussion – whole class feedback – write in pairs

A teaching sequence to facilitate Transition Year students' engagement with challenging concepts and to support academic language acquisition, enabling students to express those concepts.

Read

Written texts contain vocabulary and grammatical structures appropriate for the topic and provide a suitable context for the students to encounter challenging concepts and the associated academic language, while reading at their own pace.

Set a task, which gives the students a reason to read, for example:
- to write at least one question they would like answered on the topic of the text
- to identify unfamiliar words and phrases
Alternatively, give the students the title they will later write on in pairs.
Students should read material on the challenging topic, for example:
- an extract from a text book or article
- a helpful website on the topic, as a starting point on the internet.
Recommendations:
- Do the reading activity in one lesson and the writing activity in the next lesson.
The gap in between the two lessons gives students an opportunity to deepen their understanding by: talking to each other, researching further, talking to family members and/or others, including, for EAL students, in their mother tongue.
- Allow students to ask each other questions (quietly) during the reading activity.

Small group discussion

The discussion and open feedback are opportunities for students to explicitly define the limits of their knowledge, to ask each other questions, to practise using the academic language found in the reading, and to listen to each other using this language. This is like having a spoken rehearsal before attempting the more 'permanent' activity of writing.

Groups of approximately 4 students should attempt to answer some kind of discussion question together. The students should know beforehand that they are going to report to the rest of the class. One student in each group can be put in charge of the reporting. Example discussion questions:
- What previous knowledge does this topic build on (possibly from other subjects)?
- What makes this difficult to read and/or understand?
- What is interesting about the reading, and/or how is it relevant?
- The title students will write on in pairs.

Whole class feedback

Feedback diagnoses problem areas and motivates students during the small group discussions.

Each group should report to the class. All contributions must be respected.

Write in pairs

Writing provides a further opportunity for students to explore challenging concepts together and to learn how to use the academic language. The learning processes involved in the collaboration are as important as the product of the written work.

Each pair should work together to produce one piece of writing.
If there are two EAL students with the same mother tongue working together, they should be allowed to use their first language while they are collaborating to produce written English.

For examination preparation classes

Read – small group discussion – whole class feedback – write

A teaching sequence over two lessons, to facilitate students' engagement with challenging concepts and to support students' academic language acquisition, enabling them to express those concepts in preparation for high-stakes examinations, such as the Junior Certificate.

Lesson 1: Read

- set homework to read about the topic before the next lesson
                    or
- facilitate the reading during class time and give students the opportunity to research the topic further, in their own time.

Name the topic with care (pupils may use the term you give to search the internet and non-native English speakers may look it up in a bilingual dictionary).

Set a task, which gives the students a reason to read, for example:
- to write at least one question they would like answered on the topic of the text
- to identify unfamiliar words and phrases

Alternatively, give the title of the subsequent written assignment.
Students should read material on the challenging topic, for example:
- an extract from a text book or article
- a helpful website on the topic, as a starting point on the internet.

Lesson 2: Small group discussion – open feedback – write for homework

Small groups of students should try to answer a discussion question containing the central issue of the topic, (it may be the same as the written assignment question). Groups should start by clarifying what the question means and identifying anything they do not understand about it.

Allow plenty of time for the group discussions so that they are not rushed. The students should know beforehand that they are going to report to the rest of the class. One student in each group can be put in charge of the reporting.

Each group should report to the class. All contributions must be respected.

Address issues relevant to the written assignment highlighted by the students' comments, and take note of other issues to be addressed later.

Set the written assignment to be done individually.

Appendix 5 – Intervention 2 original guidelines for teachers

<u>Teacher Acts, Class Speaks (TACS)</u>

An activity to introduce key concepts and associated academic language, by building on each individual student's prior knowledge (approximately 5 minutes of class time).

Using mime you can help each student to access their own prior knowledge and recall the terminology they already know around the subject area. For EAL students this may be in their mother tongue. You are offering the class the opportunity to name the concepts in English together, through collaboration with you and each other and to co-reconstruct your chosen target sentence, which may contain academic structures such as the passive voice, the formula of a definition and/or condensed language.

<u>Preparation before the lesson</u>

Identify a key concept that you want to introduce to the students.

Formulate a short sentence, which presents this concept in appropriate academic language. Example target sentences:
Biology – 'In DNA replication each chromosome produces an exact copy of itself.'
Business – 'Marginal cost is the cost of producing one more unit of a good.'
Geography – 'U-shaped valleys are formed by glaciers.'
History – 'The Easter Rising was suppressed after 7 days of fighting.'
Mathematics – 'Solving simultaneous equations means finding the values of x and y.'
Religion – 'The ecumenical movement aims to unite different denominations.'

Consider and plan how to represent each word or part of your sentence using mime and visual aids, without speaking. You may find conventions from Charades useful, for example:
- start by giving the number of words in the sentence
- refer back to the number of words in the sentence and their order as you proceed
Student guesses are informed by students' knowledge of the patterns of academic English, especially if you keep referring back to the number of words in the sentence, and the order of the words that have already been identified.
- use 'sounds like': mime a word that rhymes with or sounds similar to your target word
- break up a word that is difficult to mime into syllables or sections
- (as a last resort) spell words or parts of words in the air

<u>In class</u>

Say nothing at all for the duration of your TACS activity. Stick to your original sentence.
Remaining silent creates a verbal vacuum for the students to fill with suggestions of words.
Elicit your sentence from the class in a similar way to playing Charades.
Be prepared to face silence, laughter and subsequently shouting out.
It is unavoidable and normal that some student talk will be off task.
You will have to reject a lot of commendable suggestions from the students.
There is no shame in having a suggestion rejected by the teacher, rather this contributes to the class' aim of discovering the target sentence.
While students are making suggestions, they are collectively recalling useful relevant vocabulary. This activity can generate a lot of noise and may seem to favour extrovert students, however, quieter students may benefit from being under no pressure to speak, and having time to think.
Once the class have fully reconstructed the sentence, it should be written up and used as a focus for the lesson.

Appendix 6 – Intervention 2 revised guidelines for teachers

<u>Academic Sentence Charades</u>

An activity to reinforce and/or revise academic language (vocabulary and/or sentence structure) associated with the key concepts of a topic.

Mime can help each student recall the terminology they already know around a subject area. For EAL students this may be in their mother tongue. This miming activity offers students the opportunity to collaborate together to name the concepts in English and co-reconstruct the teacher's chosen target sentences, which may contain academic structures such as the passive voice, the formula of a definition and/or condensed language as well as subject specific terminology.

<u>Preparation before the lesson</u>

Identify key terms you want to reinforce/revise. Formulate sentences containing these terms in appropriate academic language. You should prepare about six or seven sentences, written onto cards so that they can be passed around the groups of students.

Example target sentences:
Biology – 'A mutation is a change in the structure of DNA.'
Business – 'Marginal cost is the cost of producing one more unit of a good.'
Geography – 'U-shaped valleys are formed by glaciers.'
History – 'The Easter Rising was suppressed after 7 days of fighting.'
Religion – 'Unrealistic images in the media pressurize people to conform to stereotypes.'

Choose one of your sentences to use as an example from the front (a short but challenging to mime sentence is ideal, so that students understand that it is part of the activity that they make multiple suggestions, and that there is no shame in having a suggestion rejected by the teacher, or later in groups, rather that this contributes to the aim of discovering the target sentence).
Consider and plan how to represent each word or part of your sentence using mime and visual aids, without speaking. You may find conventions from Charades useful, for example:
- start by giving the number of words in the sentence
- you can represent the words by lines drawn on the board and fill in the words as you proceed
- refer back to the number of words in the sentence and their order as you proceed
Student guesses are informed by students' knowledge of the patterns of academic English, especially if you keep referring back to the number of words in the sentence, and the order of the words that have already been identified.
- use 'sounds like': mime a word that rhymes with or sounds similar to your target word
- break up a word that is difficult to mime into syllables or sections
- (as a last resort) spell words or parts of words in the air

<u>In class</u>

Say nothing at all while you mime your example sentence. Stick to your original sentence.
Remaining silent creates a verbal vacuum for the students to fill with suggestions of words.
Elicit your sentence from the class in a similar way to playing Charades. Be prepared to face silence, laughter. Encourage shouting out. It is normal that some student talk will be off task.
While students are making suggestions, they are collectively recalling useful relevant vocabulary. This activity can generate a lot of noise and may seem to favour extrovert students, however, quieter students may benefit from being under no pressure to speak, and having time to think.

Once the class have fully reconstructed the sentence and understand how the game works, divide them into groups of 5 or 6 students, give one sentence card to each group, which they pass on after they have completed the sentence. Observe students' progress as you monitor the activity.

Appendix 7 – Intervention 3 guidelines for teachers

Explicit focus on language – problem solving discussion (Intervention 3)

A classroom activity to address students' problems with specific vocabulary items and to generate discussion around a topic. This activity addresses academic language at the level of word or phrase.

Instructions to the class

This activity will take about half the lesson:
You will work in pairs to solve a problem.
You will explain your solution to the problem to other students and they will explain their solution to you. You will then choose the best solution together.
You will change groups. You will explain your solutions to each other in your new group and decide on the best solution together.
You will write this down and tell the rest of the class.
Here is the problem . . . . (display the problem on the board)

Linguistic problems

Use this activity when a lot of the students use a term incorrectly, avoid using a term because it is difficult, confuse two or more terms because of their similarities etc or because you anticipate from your previous experience that they will find the term(s) challenging. Formulate the 'problem' so that students explicitly address the issue.
For example:
How can you remember the difference between X and Y (two words that sound similar, but have different meanings)
egs: from Genetics: 'translation' and 'transcription', from Religion: 'evangelical' and 'evangelistic'
How can you remember the difference between A and Z (two words with only a small but significant difference in their meanings)
Why is this phrase incorrect 'X Y Z' (an incorrect phrase that appears repeatedly in students' work), what is a correct version and how can you remember to use Y correctly?

Problem solving discussion (with suggested approximate timings)

1. Give the students the linguistic problem to solve together in pairs (plus a group of 3, if there is an uneven number of students). Tell them that they need to be able to explain their solution to other students (approximately 2 minutes)
2. Put the pairs together (2 pairs together to form groups of 4 in small classes of up to 24 students, and 3 pairs together to form a group of 6 in larger classes of up to 36 students). The students tell each other their solutions and decide which one they think is the best from within the group. Tell them they must all be able to explain the chosen 'best' solution to other students on their own (approximately 4 minutes)
3. Assign each student a number (1, 2, 3 or 4 if they are in a group of 4, and 1,2,3,4,5 or 6 if they are in a group of 6. If the class does not divide exactly by 4 or 6, and you had to have a different sized group, just assign numbers from 1 up to the number of students in the group). It is important that every student is sure of their number; make all the 1s put up their hand (there should be one in each group), then all the 2s etc. Assign an area of the classroom for each group: group 1 containing all the 1s in the back left corner, group 2 containing all the 2s in the back right corner etc. The students move to their new groups, with their notes from the discussion so far (approximately 2 minutes)
4. The students within each new group tell each other the solution their previous group chose as the 'best' and then decide together on their favourite solution using all the ideas they have discussed throughout the activity. They write this solution down, with their reason for choosing it, to read out to the rest of the class (approximately 5 minutes).
5. A spokesperson from each group reads out their group's chosen solution (approximately 3 minutes).

Grouping the students for discussion

Example for a class of 29 students:

1. Thirteen pairs and one group of 3 students.

S-S   S-S   S-S   S-S   S-S

S-S   S-S   S-S   S-S   S-S

S-S   S-S   S-S   S-S-S

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2. Five groups of 6 students and one group of 5 students.

S-S   S-S   S-S   S-S   S-S

S-S   S-S   S-S   S-S

        S-S

S-S   S-S   S-S   S-S-S

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3. Each student gets a different number from the others in their group of 6 or 5.

S1-S2 S3-S4   S1-S2   S1-S2 S3-S4

S5-S6   S3-S4 S5-S6   S5-S6

        S1-S2   S1-S2

S3-S4 S5-S6   S3-S4-S5

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4. Six new groups: five groups of 5 pupils and one group of 4 pupils. All the pupils are now working with pupils they have not already worked with.

S1-S1-S1-S1-S1   S2-S2-S2-S2-S2   S3-S3-S3-S3-S3

S4-S4-S4-S4-S4   S5-S5-S5-S5-S5   S6-S6-S6-S6