

Chapter 1

Introduction to the study

1.1 Introduction

This chapter provides a brief outline of the study and its origins. It begins by identifying the issues to be addressed and provides a rationale for the research. The chapter goes on to explain briefly the concept of immersion, and to consider research undertaken in Kiel, Germany (e.g. Wode, 1995, 1998), which provided the initial impetus for this study. The aims and hypotheses of the study are described and a brief explanation of research methods and procedures is provided.

1.2 Research problem

The central questions posed in this study are:

- (a) how do different types of immersion in English, typical of certain kinds of primary schools in South Africa, affect the vocabulary size of second language (L2) speakers of English; and
- (b) how does the vocabulary of these immersion groups compare with that of mother-tongue speakers of English (MT) of the same age?

The study focuses on students in Grade 7, between the ages of 12 and 14, and two dimensions of immersion are identified: length, which refers to the period spent in immersion; and quality, which refers to the type of immersion environment in which subjects find themselves.

Vocabulary size is an important component of a speaker's overall language proficiency (Cooper, 1999; Laufer, 1997; Pretorius, 2000), and competence in the language of tuition has in turn been found to be a strong determinant of academic achievement (Anderson and Freebody, 1981; Cooper, 1999;

Corson, 1985, 1997). An important issue to be clarified by this study is whether there is a gap between the immersion subjects' vocabulary size and that of mother-tongue speakers of English who, it is presumed, have enough vocabulary to cope with the textbooks they will be encountering in the high school classroom. The use of mother-tongue speakers of English as a kind of benchmark or foil against which to measure the immersion subjects' vocabulary size is most appropriate here as the literature does not provide a clear indication of how much vocabulary Grade 7 students need in order to cope at high school level. Nevertheless, research related to vocabulary levels appropriate to other stages of development will be discussed in some detail in Chapter 2 (e.g. Coady, 1997a; Laufer, 1992; Laufer and Sim, 1985; Nation, 1990) in order to explore this issue. It is hoped that this study will make an indirect contribution in ascertaining the appropriate vocabulary size for students at this level, given the assumption that the mother-tongue speakers of English in Grade 7 have a large enough vocabulary to deal with the texts they encounter at school.

1.3 Context of the research problem

Particularly relevant to the present study is the research done on immersion and how a second language, and more specifically its vocabulary, can be acquired incidentally through learning content and performing communicative activities. These activities give learners the opportunity to use the language to do things, engaging particularly in meaningful interactive oral language production. Both the German study (§1.3.2) and the present study take an indirect approach to vocabulary learning, the basic premise being that vocabulary learning may be incorporated into communicative activities which give the learner the opportunity to use the language to do things. Immersion provides for situations where the focus is not so much on learning the language as it is on learning the content of a subject *through the medium* of that language. Emphasis is on communication and fluency rather than on accuracy (Laufer, 1986; Nation and Thomas, 1988, in Nation and Newton, 1997), and texts are generally meaningful and authentic. Several studies have shown that second language learning will be more successful when learnt in meaningful contexts rather than in grammar lessons which are isolated from meaning (Newton, 1995; Simcock, 1993, in Nation and Newton, 1997). Immersion education ensures that students are exposed to situations where they hear and read the target language, and where they are encouraged to move beyond their current abilities in this language through meaningful feedback on the accuracy, coherence

and appropriateness of their language use (Swain, 1996).

The following two sections briefly explain the term immersion as it is used in this study, and provide some information on the Kiel study which provided the initial idea for this research. The third section explains the rationale for the focus on vocabulary acquisition.

1.3.1 What is immersion?

Genesee (1983:3) defines immersion as ‘a type of bilingual education in which a second language (or languages) is used together with the pupils’ native language as medium of instruction during some part of their primary or secondary education’ (see §2.2). Since 1965, various forms of immersion education have developed, differing mainly in the grade levels at which the second language is introduced as the main medium of instruction, but also in the perception of what actually constitutes immersion. Genesee (1983) mentions Early, Delayed or Late Immersion programmes, but other researchers have identified as many as 20 different interpretations of immersion (Obadia, 1998) in terms of, among other features, the amount of instruction provided in the second language (L2), the number of years during which the L2 is used as the major medium of instruction and the number of languages that are introduced (§2.2.1).

In present day South Africa, despite official recognition of eleven official languages, the reality is that many parents choose to have their children taught through the medium of English. The result is that many students find themselves in some sort of immersion situation. Children attending former Whites-only ‘ex-Model C’ schools (§2.2.3) are placed in a situation of total immersion, or submersion (Beardsmore, 1995; Hubbard, 1998; Obadia, 1998), in that frequently the entire curriculum is taught through the medium of English (or Afrikaans, at previously Afrikaans-medium schools). For the most part, all communication related to the running of the school – interpersonal communication between staff members and between staff and pupils, communications made to parents, and so on – is also conducted in English. There is very little use, if any, made of the immersion children’s L1 in the classroom, although as numbers of L2 speakers of English grow at these schools, so too the use of indigenous African languages and code-switching increases, both in the playground and in the more formal confines of the classroom. The situation in township and rural schools is very different, however: although the medium of instruction is claimed to be English, teachers are very rarely mother-tongue speakers of the language

and teaching is frequently facilitated by code-switching between English and the learners' L1. The day-to-day running of the school is also conducted in languages other than English, constituting what Hubbard (1998:666) refers to as 'pseudo-immersion'.

Consequently, in the present study the term 'immersion' is used rather loosely to describe the situation in which many L2 speakers of English in South African schools find themselves today. At the schools such as the two featured in this study children are taught exclusively through the medium of English, teachers are MT speakers of this language with no, or very little, knowledge of their immersion students' mother tongues, and all school business is conducted in English. Although many students speak their L1 amongst themselves, this has not always been encouraged. In fact, until recently the L1 was often actively discouraged in schools, resulting in the fostering of subtractive rather than additive bilingualism (§2.2.3).

Emphasis in this study is on the effects that varying degrees and types of immersion had on the vocabulary size of learners who, at the time of data collection, were in Grade 7 (that is, between the ages of 12 and 14) at two English-medium South African primary schools. These schools were situated in the same city, and despite a very different pupil make-up, had very similar staffing profiles. However, the student dynamic was what was of major interest. School D (see §3.2 for how schools were categorised) drew its students from a more affluent, middle-class socioeconomic background and still had a majority of MT English speakers in Grade 7 at the time of data collection, whereas students from School S tended to be speakers of African languages and from working class backgrounds, with more students having come directly from the townships and enrolling at the school midway during their primary school careers.

The study comprises a comparison of the vocabulary size of MT English speakers with two categories (each with two sub-categories) of non-native English speakers who had experienced different periods and types of immersion: early and late and deep and shallow immersion subjects. Early immersion (EI) includes students who had been in an immersion situation for four years or more; in many cases, since the start of their formal schooling, either Grade 0 or Grade 1, or at least since Grade 2 or 3. Late immersion (LI) subjects had been in an immersion situation for fewer than four years. Deep (DI) and

shallow immersion (SI), on the other hand, is a categorisation applied to the type of school environment in which these learners had been placed (see §1.7 and §3.2 for a further explanation of these terms). School D constituted deep and School S, shallow immersion. The MT English speakers in the study were used as a type of benchmark or foil against which to compare the vocabulary size of the immersion subjects.

1.3.2 The Schleswig-Holstein Immersion Programme and the Kiel study

The present study was initially inspired by the Schleswig-Holstein Immersion Programme started by this German state government in 1990 (§2.2.2). The rationale driving this programme was the feeling that in future all citizens of the European Union would need a good command of several European languages. Focusing on this programme, the Kiel study (see Daniel and Nerlich, 1998; Kickler, 1995; Wode, 1995, 1998), run by the English Department of the Christian-Albrechts University in Kiel, tried to establish just how *little* immersion is needed to produce results which are superior to those of traditional language-as-subject approaches. Research questions included whether English vocabulary learning occurs incidentally while students are learning geography or history, or both, through the medium of English in the ‘low-dose, late partial immersion program’ (e.g. Wode, 1995, 1998, 1999). In his research, Wode (e.g. 1995) uses the term ‘immersion’ when referring to the promotion of a foreign language by using it as the language of instruction of some or all subjects in the curriculum, regardless of whether the programme focuses on majority or minority language students and regardless of the time allocated to this language across the curriculum. His project compared the effects of ‘minimal’ immersion (Wode, 1999:248) to the effects of non-immersion (exposure to English in the English language class only).

As stated above, Wode and his fellow researchers wanted to determine how *little* immersion was needed for the second language (L2) – in this case English – to be established and enhanced before a third language (the L3) could be introduced. In this way children could be exposed to at least three, and possibly even four, European languages. Researchers specifically investigated the differences in vocabulary size and, to a lesser extent, proficiency levels, between children who had been exposed to varying degrees of immersion in English. In the present study, subjects’ scores on vocabulary tests and

from a written exercise were used in order to make a comparison of the vocabulary size of the various categories of learner, that is early and late immersion and deep and shallow immersion subjects, and mother-tongue speakers of English.

Wode (1995, 1998) describes three types of schools in Europe in which children receive part of their instruction in a language other than their home language – this is usually their second language, but may even be a third. This could be compared to the situation facing many children in South African schools today, where the medium of instruction is English but the home language or mother tongue (L1) of the students is another language, and where very often several languages are represented in one classroom (Hubbard, 1998). As Wode (1995) remarks, it is in fact increasingly exceptional for children to be educated through the medium of their home language, even in the First World. This seems to provide some evidence that, contrary to traditional assumptions, education may not necessarily have to be tied to the mother tongue, and that learning unfamiliar languages may be achieved very successfully as a by-product of focusing on subject matter.

The following section explains the rationale for this study's focus on vocabulary size.

1.3.3 Vocabulary size

To what extent does the vocabulary size of the learner affect linguistic competence? Several studies have shown that vocabulary size affects academic performance (Anderson and Freebody, 1981; Cooper, 1999; Corson, 1985, 1997). Cooper's study revealed that 'a significantly larger proportion of mother-tongue students is successful' at the end of their first year of study than their non-English speaking counterparts (1999:2). She showed that this could at least in part be attributed to low levels of vocabulary of L2 English speakers. Limited vocabulary and poor linguistic competence may prevent students from gaining adequate access to subject matter. The present study examines the vocabulary size of Grade 7 learners: Grade 7 is a crucial juncture in South African children's educational development in that it is the preparatory year for secondary school, where learners will be increasingly exposed to expository academic texts and where success in dealing with these texts is vital to academic achievement. Poor linguistic competence may result in the learner misunderstanding the subject matter

(Pretorius, 2000, 2002a). Part of this problem stems from a lack of appropriate vocabulary as adequate vocabulary knowledge is fundamental to an understanding of text (§2.3.2).

The three sections above have sketched the research context. The following sections deal with the aims and methods of this study.

1.4 Research aims

The primary aim of this study is to establish the effects of length of immersion and quality of immersion on vocabulary size, and to compare the vocabulary size of the various immersion groups with each other and with that of the MT English speakers. Size in this context refers to the number of different lexical items or families recognised or used by the subjects, and their distribution across the vocabulary levels defined by Nation (1990) and used in the Lexical Frequency Profile (§2.4).

1.5 Research questions

This study seeks to answer the following questions:

- (a) how do different types of immersion affect the vocabulary size of L2 speakers of English in Grade 7; and
- (b) how does their vocabulary size compare to that of their MT English classmates?

This involves an investigation of whether length of immersion or quality of immersion has the greater effect on immersion subjects' vocabulary size; or whether in fact there is any difference in effect between these different aspects of immersion.

1.6 Hypotheses

Two general hypotheses were formulated, one relating to length of immersion and one to quality of immersion, and each was tested in terms of two specific hypotheses that focus separately on receptive and productive vocabulary.

The general length of immersion hypothesis was expressed thus:

Hypothesis L: *The vocabulary size of EI (early immersion) subjects will be significantly larger than that of LI (late immersion) subjects, and MT (speakers of English as mother tongue) subjects will have a significantly larger vocabulary than both EI and LI subjects.*

This general hypothesis was tested in terms of the following specific hypotheses:

Hypothesis LR: *The receptive vocabulary size of EI subjects will be significantly larger than that of LI subjects, and MT subjects will have a significantly larger receptive vocabulary than both EI and LI subjects.*

Hypothesis LP: *The productive vocabulary size of EI subjects will be significantly larger than that of LI subjects, and MT subjects will have a significantly larger productive vocabulary than both EI and LI subjects.*

The general quality of immersion hypothesis was formulated thus:

Hypothesis Q: *There will be a significant difference in the vocabulary size of MT, DI (deep immersion) and SI (shallow immersion) subjects.*

This general hypothesis was tested in terms of the following specific hypotheses:

Hypothesis QR: *There will be a significant difference in the receptive vocabulary size of MT, DI and SI subjects.*

Hypothesis QP: *There will be a significant difference in the productive vocabulary size of MT, DI and SI subjects.*

Hypotheses LR and LP are expressed as directional hypotheses, while hypotheses QR and QP are

expressed as non-directional hypotheses. The rationale for this is provided in Chapter 3 (§3.2).

1.7 Research method

I selected as subjects for the study Grade 7 students at previously Whites-only ex-‘Model C’ English medium primary schools (§2.2.3), where teachers were predominantly mother-tongue speakers of English. Groups were constituted as follows:

- (a) the group of mother-tongue speakers of English who had been educated through the medium of English since Grade 1 or even earlier served as the control group in that scores of immersion subjects were compared to these subjects’ scores as they represented the benchmark or standard regarding the vocabulary size of an average MT English Grade 7 learner;
- (b) L2 speakers of English who had experienced immersion for different periods, either early (EI) or late immersion (LI); and
- (c) L2 speakers of English who had experienced a different type, or quality, of immersion experience, referred to as deep (DI) or shallow immersion (SI) subjects (see §1.3.1).

The latter group (explained in (c) above) was determined by which of the two schools the students attended (§3.2): School D constituted deep immersion, as it had a richer English language environment than School S, a shallow immersion environment, where the majority of learners were African language L1 speakers and the English language environment was not as rich as that of School D. Members of these groups clearly overlapped in some instances, hence the use of one-way ANOVAs to test separately for the two variables of length and quality of immersion.

1.7.1 Research procedure

Once the schools had been identified, a questionnaire (§3.4.1; Appendix A) was devised to determine the subjects’ language background and period of immersion in English, in order to establish the immersion and English mother-tongue groups. The next step was an analysis of the vocabulary in a textbook used by the learners to determine the frequency levels of vocabulary and the Reading Ease

Score (§3.4.2; Appendix B). Two chapters of a Grade 7 history textbook were scanned and analysed, using the VocabProfile computer program (§2.4), which compares the text to vocabulary lists and indicates which words in the text are and which are not in these lists. It also calculates what percentage of the items in the text are covered by the lists. Words in the text are marked by the program and listed in types and families, according to the list in which they occur. The program also provides information on frequency and coverage (Laufer and Nation, 1995). Once the frequency levels of the vocabulary in the two chapters had been established, two multiple-choice, cloze type vocabulary tests were compiled to measure the size of the learners' receptive vocabulary (see Appendix B). One test was based on each of the two chapters of the textbook. Subjects also completed Nation's (1990) Vocabulary Levels Test (Appendix B) to add an extra dimension to the investigation into receptive vocabulary size (see §3.4.3).

In order to establish the size of students' productive vocabulary, written data were obtained from each subject via a free writing exercise. They were asked to write responses to prompts related to the discussion topic, 'A Desperate Decision' (Klippel, 1984; see §3.4.4 and Appendix C). This followed a brief class discussion of the problems presented in the passage. Written responses were analysed using the VocabProfile computer program (§2.4) and the Lexical Frequency Profile of each pupil's productive vocabulary was determined (Laufer and Nation, 1995). As was remarked above (§1.2; §1.3.1), scores were computed and compared using ANOVAs. The results are discussed in detail in Chapter 4.

1.8 Synopsis of the remainder of this dissertation

Chapter 2 reviews relevant research, covering issues such as the origins of immersion as well as current immersion practices in Europe and South Africa, incidental language acquisition and the question of an optimum vocabulary size for comprehension of academic texts at Grade 7 level. The importance of vocabulary in L2 and academic success is also discussed. An explanation of the Lexical Frequency Profile and its use in research is provided.

Chapter 3 deals in detail with the research method and procedures, and starts by providing a rationale

for each hypothesis. It describes the data gathering procedures and explains the research design – how subjects were identified, and the measurement of their spoken and written vocabulary size. The statistical procedures used to analyse the data are explained.

Chapter 4 presents the results of the study and provides interpretations of these results.

Chapter 5 concludes this dissertation, first summarising the major findings. An analysis of the shortcomings and limitations of the study is provided as well as implications for further research. Suggestions of possible implications for and applications to classroom teaching are also made.

Appendix A contains the questionnaire used in the study.

Appendix B comprises the vocabulary tests administered to the subjects in the study, as well as a sample of the material on which Tests A and B were based.

Appendix C contains the passage and the prompts used in the writing exercise.