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The written assessment of the vocabulary knowledge and use of English majors in Hungary

PhD dissertation summary

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1. Introduction

The last few decades have witnessed a boom in the interest towards vocabulary-related issues both from specialists and non-specialists including, but not limited to, applied linguists investigating first and additional languages, corpus linguists, language instructors, curriculum planners, textbook and dictionary writers, and language learners. This interest has resulted in numerous books and anthologies on second and foreign language (L2) vocabulary, with emphasis on the English language. Research has found that vocabulary knowledge plays an important role in reading comprehension, oral and written text production, as well as overall proficiency test results.

While we can read about a growing number of reports on the English as a second language or English as a foreign language vocabulary of learners with different L1 backgrounds, very little is known at all about Hungarian learners of English in this respect. Beginning from the 1970s, a number of large-scale studies have been carried out which measure elementary and high school students' knowledge and skills in various subject areas, including foreign languages, but these provide limited vocabulary-related data. This is the first time that the multifaceted nature of the vocabulary knowledge of English majors in Hungary is discussed in a comprehensive nature.

2. Aims and research questions

The empirical investigation of the present dissertation wishes to bridge the gap in the literature relative to Hungarian university students' lexical knowledge by assessing it from a number of perspectives. Rather than simply providing a description of the size of their lexicon, the question of the relationship between the various types of knowledge targeted by different tests, the possible reasons behind the different test results, the relationship between test scores, and the actual vocabulary use in written production tasks are addressed. To achieve this aim, a multi-level approach is adopted. First, scores obtained on tests of controlled receptive, controlled productive, and free productive vocabulary knowledge are analyzed and correlated to each other and to factors that could influence this vocabulary knowledge. Second, test scores are also investigated in terms of their predictive nature of

academic success in a foreign language medium education at tertiary level, including reading ability, text comprehension, written text production and course grades.

In the light of the issues raised in the literature review and considering the findings of a series of pilot studies, the following seven major research questions are addressed in this dissertation:

1. What is the vocabulary knowledge of first- and third-year Hungarian university English majors as measured by receptive and productive tests?

2. What is the influence of the amount of academic experience and the amount of language practice (as defined by the amount of time spent with English inside and outside of school and language learning background) on the learners' vocabulary knowledge?

3. What is the relationship between the knowledge of receptive and productive vocabulary of students as measured by tests? In other words, to what extent can scores on a receptive test predict scores on a productive test? Also, how do sub-scores and overall test scores relate to each other?

4. How can vocabulary test results predict academic success in terms of reading ability and successful passing of courses? In other words, first and foremost, do students meet the minimum threshold level needed to read general and academic texts? And also, can we set a minimum lexical proficiency level for students without which they are likely to fail in their English language medium studies?

5. What is the relative role of vocabulary knowledge (as measured by the vocabulary tests in research question 1) in the lexical richness of L2 written production tasks? In other words, does a larger lexicon lead to more sophisticated vocabulary use during written production?

6. To what extent can differences in the vocabulary use in written production be explained by a) students' experience of producing texts in the target language, b) students' stated overall text writing strategies, including their view of the role of vocabulary in text production and c) topic choice?

7. How does lexical knowledge, as measured by vocabulary tests, change over one academic year?

3. Methodology

3.1 Participants

All participants in this empirical study are students at the University of Szeged, majoring in English and/or American Studies. The student population consists of a total number of 342 subjects including three major groups: the incoming-first-year, the end-of-the-first-year and the end-of-the-third-year groups, as shown in Table 1. It needs to be clearly stated that these three major participant groups are independent from each other. This means that students who participated in the study in Group 1 (at the beginning of the first year), for example, were not retested later as Group 2 (at the end of the first year). Direct comparison between these three groups is only treated in some of the minor research questions. Moreover, several other groupings were made on the basis of various factors, such as amount of language practice or test results in order to answer specific research questions. Longitudinal changes are discussed in a case-study involving 15 students from Group 1 who were retested at the end of their first academic year.

Table 1 Major groups of participants

Group	Year	Number of students	*Time of data collection*
1	Incoming first year	148	September 2006
2	End of the first year	101	April–May 2006
3	End of the third year	93	April–May 2006 and April–May 2007
Total		**342**	

3.2 Research instruments

In order to explore the research questions listed in the previous section, the following broad categories of data were collected:

- Three tests of vocabulary knowledge: Vocabulary Levels Test, Productive Vocabulary Levels Test and Lex30 association test.
- Written product: an essay written during comprehensive language exams from Groups 2 and 3
- Questionnaire: background information about the subjects with particular reference to their language-learning experience and practice with reading and writing in the target language.
- Course grades from Groups 1 and 2
- A structured interview for the follow-up study with 15 first-year students

3.3 Rationale behind methodology

Participant groups and research instruments were selected in order to enable us to explore the research areas in as much detail as possible. This means that English majors' lexical knowledge and use are investigated at key points of their studies and from a variety of data sources. The research instruments and data handling methods were piloted with university and secondary school students in order to rule out all possible problems that could emerge during the final empirical investigation. The pilot phases proved to provide valuable information that facilitated the research discussed in this dissertation.

A major strength of the above discussed methodology is the rich data it is able to elicit. Students' vocabulary knowledge is targeted from various angles, not limited to one or two aspects. Most of the elicited information can be translated into numerical data which enables in-depth, quantitative analysis. However, qualitative data are also explored to supplement and illustrate the major finding of the empirical investigation.

4. Overview of the dissertation

The dissertation is divided into five main parts, each having a distinct role of general introduction, literature review, research questions and methodology, results and discussion, and review and conclusions. This section aims to summarize the content of the dissertation by following the order of the chapters.

The **first chapter** has the main role of introducing the issue of written assessment of vocabulary knowledge and use in an English for academic purposes context. After some notes on the general importance of the domain, the challenging task of defining the notion of vocabulary to be used is met. Then the Hungarian context is introduced, following the explanation of the main research areas of the dissertation.

The Literature review chapters start out with a reflection on the impossible nature of giving a detailed account of all areas of the growing body of research concerning L2 vocabulary studies. The main purpose of the literature review is that of exploring major cornerstones in the research directly relating to the empirical investigation.

In **Chapter 2** the difficult issue of construct definition is dealt with in detail. It is pointed out that the way *word* and other related terms are interpreted may have a direct bearing on research methods and analysis. The chapter then goes on to explore the role of derivational affixes and multi-word units. Finally, the role of multiple meanings of words is explored.

Chapter 3 starts out with the evaluation of a quote which suggests that the blurring of terminology may be a deliberate choice made by some researchers. It is concluded that the ill-defined nature of vocabulary is not universally purposeful, but it surely poses difficulty in interpreting the accumulated body of knowledge in certain areas. The chapter discusses various vocabulary knowledge frameworks and aspects. These frameworks have many overlapping points of which the aspects of receptive and productive, partial and precise knowledge, the accessability of the lexicon and lexical organization are elaborated on.

Chapter 4 is dedicated to the discussion of the assessment of learners' vocabulary. First, a theoretical background is provided in form of frameworks of vocabulary assessment, emphasizing the need for a careful selection of instruments. The chapter then follows on with

the discussion of test types, paying special attention to the three tests employed for data collection in the present empirical investigation. Then, I present the lexical measures used for assessing written texts, with detailed explanation of those selected for this study. Some consideration is also given to corpus studies and to the role of word frequency in assessment.

In **Chapter 5**, the last chapter of the literature review, the first part is dedicated to the discussion of the relationship between vocabulary and reading. Issues concerning the vocabulary gain from reading, the threshold level of words needed for decoding meaning, the inferring of unknown lexical items from text and the effect of repetition on vocabulary learning are discussed. The second part of the chapter examines models of the role of the lexicon in writing. The difference between seeing writing as a product and as a process is further elaborated on. The remaining parts of the chapter review some empirical studies with direct indication of the methodology and research questions used for the proposed investigation.

Chapter 6 presents the seven main research questions, explaining the rationale behind each of them and discussing specific questions related to all research areas. It highlights the importance of a multidimentional study, which uses a variety of data collection instruments to capture rich data.

Chapter 7 explains all issues concerning the methodology of the investigation, including subjects, research instruments, procedure, data handling and scoring, and the detailed piloting. With the help of the methodology discussed, it is possible to target learners' lexical knowledge from various angles and not limited to one or two aspects. Qualitative data analysis, alongside with the statistical one, is proposed.

The first part of **Chapter 8** provides the descriptive statistics for the three tests of vocabulary knowledge, the Vocabulary Levels Test, the Productive Vocabulary Levels Test and the Lex30 association task. It is shown that the treatment of the over 300 participants as one overall group allowed only for general conclusions. Therefore, in the second part of this chapter, different groupings of the study population are done on the basis of several factors that were expected to have an influence on the test results. It is explained why multiple factors are more likely to have a significant effect on test scores than individual factors. In the third part of the chapter correlations are calculated using overall and sub-scores of the three tests. This has both theoretical and assessment related importance.

The first section of **Chapter 9** investigates the role of vocabulary knowledge on the academic success of English majors. The advancement in studies is investigated, first, on the basis of predicted reading difficulty, and second, on the basis of failing or passing courses. As for reading, many of the students could be expected to show reading problems of general and academic texts due to the high proportion of unknown vocabulary. This is combined with the limited amount of overall reading done by most of the subjects. As for writing, the influence of vocabulary knowledge and topic choice in the lexical measure of texts is investigated. Students on average reported to pay less attention to vocabulary than to grammar or text organization during writing.

Chapter 10 reports on the results of a follow-up case study involving 15 first-year students tested at the very beginning and at the end of their first academic year. Overall positive group changes were found to hide great individual differences. Both negative and positive values were identified. Seven subjects showing extreme cases in their vocabulary gain are further examined using questionnaire and structured interview data.

Chapter 11 provides an overall discussion of some areas of the study that deserved further treatment, such as the role of the Lex30 test or the theoretical and practical implications of the data.

Chapter 12 gives a review of the chapters of the dissertation and draws final conclusions and discusses implications.

The dissertation ends with the **list of references** and the **appendices** which list the research instruments employed.

5. Findings and discussion

The findings and discussion sections of the dissertation are built around the seven main research questions, each treated in a separate study. The main research areas are addressed through the investigation of several specific research questions. This resulted in rich data and a series of interrelated findings of which I will here discuss only the major issues.

Study 1 had a mainly descriptive aim of presenting results of three tests of vocabulary knowledge of a given student population. There was a great variability in all test scores. This

calls attention to the fact that a subject population like this one, seen in many EFL/ESL studies, should not be treated as one homogeneous population. Overall group results can inform us about general tendencies, but inevitably raise questions of how results change on the basis of certain features.

Therefore, in Study 2 new groups within the participants were identified on the basis of the years of English they had had, their experience in an English-speaking country, amount of time dedicated to English and amount of reading done in the target language. These influencing factors seemed to play the greatest role in the receptive vocabulary size of learners. However, it needs to be stressed that statistical difference, in many cases, was found only between non-neighboring groups. This implies that a small difference in the amount of time dedicated to English and the reading done have little influence per se on the size of the learners' recognition vocabulary.

Study 3 elaborates on the relationship between scores obtained on different tests and between sub-scores at different frequency levels. It takes one step further on already existing data with other, non-Hungarian subject populations, by exploring the relationship between the results of two vocabulary size tests with the results of a productive association test. The study explores the relationship between scores obtained on one receptive test and two productive tests, to balance the need for a better understanding of receptive and productive vocabulary. Results revealed a strong relationship between the two parallel Levels Tests, and only a more moderate relationship between the association task and the vocabulary size tests. It was also shown which of the frequency levels have the strongest correlation values with overall scores and with other, neighboring levels. This result has, first of all, a strong practical value, as it facilitates test design and organization in real-life testing situations when efficiency and time constraints need to be kept in mind, and, therefore, often a much more restricted number of tests or subtests are administered.

Study 4, which investigated academic success, revealed that a surprisingly high proportion of students seem to have a serious lack of recognition vocabulary to the point of not being able to fluently read even general texts in the target language. The figures prove to be even more alarming in the case of academic texts which are part of the second and third-year syllabus in content classes. On the whole, it can be concluded that vocabulary gain from reading is expected to be minimal and text comprehension is seriously limited in the light of

the lack of the vocabulary threshold levels and academic topic matters. When looking at academic success of first-year students in terms of failing course grades, data show statistically significant correlations between all test results and failures. At-risk groups could be identified on the basis of test results, which has practical value in future student testing and syllabus design.

The focus of Study 5 was the relative role of vocabulary knowledge in the lexical richness measures of L2 written production tasks. The study explored whether a larger lexicon leads to more sophisticated vocabulary use in writing. The lexical profile, the type/token ratio and the lexical density figures of student essays were compared to their scores on the two productive vocabulary tests. The productive vocabulary size measured by the Levels Test seems to be a better predictive instrument of the vocabulary use in written production tasks than the associative links assessed by the Lex30.

Study 6 targeted possible influencing factors of lexical measures in student essays. Writing experience in the target language and stated overall writing strategies related to language use did not show a statistically significant influence on the lexical measures of texts written under controlled circumstances. It could be concluded that even tests that are labeled as productive and are designed to resemble real language use cannot fully predict the vocabulary activated for certain situations. Tasks seem to have a direct bearing on the language use of learners, some asking for more sophisticated vocabulary use than others. On a more practical level, one of the major implications of this study is the need to sensitize students to vocabulary use. Not only do they need to practice text production, but practice it while dedicating more attention to vocabulary choice alongside other parameters of writing.

Study 7 is a case study involving 15 first-year students, with the aim of following up on their vocabulary change over a period of one academic year. We could find overall positive group changes, but varying degrees of negative and positive changes at a subject level. The reported patterns of change were found not to be erratic and could be explained by students' strategies of exposure to the target language, such as engaging in explicit vocabulary learning and taking university language seminars which focus on vocabulary building.

6. Conclusions and implications

On the whole, the added value of the present empirical investigation is the following: a) it employs various testing methods with clear reference as to what they aim to measure, and it assesses the relationship between test results, vocabulary use and background factors that may affect these results; b) it involves a student population whose vocabulary knowledge and use has not been thoroughly investigated; c) it analyzes test results as possible predictive measures of academic success; and d) it relates research questions and discussion to theoretical, research and practical issues in need of further evaluation both for the specific research population involved and in a wider context.

This dissertation was written with both theoretical and practical needs in mind, on the one hand asking for the clarification of research instruments and data interpretation, and, on the other hand, having the need of simple testing methods that are easily available and readily usable in language instruction and syllabus planning. Rather than designing alternative tests, the dissertation wished to employ data collection methods and research tools (tests of various formats and text analyzers) that had already been partly used in university contexts, both in Hungary and elsewhere, and that could be easily introduced in a wider context either as diagnostic measures of students' vocabulary, as tools to be integrated in instruction, or as help that could be directly used by students during their individual language studies. It was of both theoretical and practical value to gain information on how these instruments can inform us about students' lexical knowledge and use of which, so far, we could only have partial insight or assumption on the basis of limited data and everyday observation of coursework and language exam results. The implications of the research are valid to other, similar educational contexts in Hungary or elsewhere in the world.

Further research would be needed to follow up on the longitudinal study done at an individual level, as it has been shown that treating the subjects one-by-one might provide more meaningful data than group averages. A major pedagogical implication of the study is the large individual variability in vocabulary knowledge that could be documented. Many first-year students seem to lack the threshold lexical knowledge needed to read general and academic texts and to function in a target-language medium education. While upper grade

groups reached better test scores, these can be partially attributed to the high drop-out rate of weak students early in their studies. Based on the case study we can conclude that only those who do excessive language practice and employ explicit learning strategies show meaningful gain in their vocabulary. To overcome the primary language difficulties, the first 5,000 word families, alongside with basic technical vocabulary of course materials, should be systematically and explicitly learned. Moreover, strategies to cope with less frequent words should be learnt, but strategies which include more than simply ignoring all unknown vocabulary, because that is unlikely to lead to any lexical gain over time. Since most students arrive at the university with no useful strategy of independent vocabulary learning, help should be offered to them in form of extra vocabulary building classes or by directing them to materials available for individual study.

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