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**TEACHING READING ENGLISH ACADEMIC TEXTS
TO PHILOLOGY STUDENTS**

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PREFACE

The expansion of international relations with other countries sets the requirement to train highly qualified philologists with excellent knowledge of foreign languages who will be able to successfully participate in international projects, exchange information with foreign partners, help to transfer new knowledge and valuable ideas. As English has become a lingua franca it is getting more and more important for philology students to develop an appropriate level of English skills to perform professional duties in different fields.

A necessary aspect of philology training is teaching English academic reading which is a fundamental source of both language and content information, provides a major opportunity for further learning, helps to improve not only reading comprehension skills but also writing and speaking skills, motivates students to explore topics further, attracts readers' attention to particular problems, generates their interest and encourages further learning.

Academic reading enables focusing attention not only on language instruction but rather on mastering both the language and the content matter of other professional disciplines. Such a shift creates a situation when main attention is paid to content matter of professional discipline, and the language skills are developed to some extent implicitly as the language and text analysis serve mainly to understand and acquire the content [122, p. 116]. In other words, students master integrated knowledge and skills with the focus on professional disciplines.

As reading is considered an important educational practice in academic settings, there have been numerous attempts to study the evolving nature of the notion, which is still being reconsidered in terms of new research findings (J. Bamford [61], E. B. Bernhardt [67], Z. Breznitz [71], R. R. Day and J. W. Bamford [92], W. Grabe [121; 122; 123], J. S. Hedgcock and D. R. Ferris [132], T. Hudson [140], K. Koda [155], K. Lems, L. D. Miller, T. M. Soro [161], K. Mokharti [186; 187], I. S. P. Nation [191], F. Smith [224], S. Urquhart, C. Weir [236] etc.). Specialists from different fields related to reading (psycholinguists, applied linguists, educational psychologists,

foreign language teachers, experts in the field of reading) have been trying to analyse reading as a process, ability, competence, skill, and compose a reading model based on the ideas of goal-directedness, intentionality, integrity with other skills, author-reader relations (W. Kintsch [149], L. McNeil [177], C. Perfetti [200], K. Stanovich [227]). In recent studies the main focus has been shifted from text decoding and comprehension to the readers themselves (with their background knowledge, interests, strategic awareness) and their response to the text [86, p. 11].

Over the past decades there have been numerous scientific studies on teaching reading to university students. As a result various methods of teaching reading professional texts to philology students (I. V. Koreiba [15], L. H. Kozhedub [14], E. V. Pomanisochka [25], A. V. Rubtsova [29], T. O. Vdovina [7]), non-philology students (N. M. Mahazova [19]), in particular technical students (I. Ya. Lytvynenko [17]); future managers (S. A. Lvova [18]), economists (S. V. Radetska [27]), engineers (Yu. V. Romaniuk [28]) have been developed.

The research analysis shows that some attention has been paid to foreign language academic reading. Thus, O. S. Maliuha [21] has suggested the methodology of reading academic texts by future agronomists. W. Grabe and F. L. Stoller [123] developed guidelines for teachers of English as a foreign language on how to teach reading for academic purposes. There have been made attempts to give some insights into academic reading experience of English philology students by H. Chodkiewicz [86].

However, the analysis of modern scientific literature demonstrates that the methodology of teaching reading English academic texts to philology students has not been developed yet.

A typical and key genre of academic world is a research article as it describes latest scientific advances of scholars from different countries and is a reliable source of information which is of professional value to the reader. Since more than 90 per cent of the modern journals is edited in English [142, p. 24], it is necessary for future philologists to master the academic style to get access to the valuable information and get acquainted with the standards for academic communication to perform professional duties on an appropriate level.

The scope and features of the research article (length in particular) give students an opportunity to read a variety of them choosing the ones which are of the utmost interest to the future philologists and meet the selection criteria. Reading research articles enables students not only to develop academic reading competence, but also increase and strengthen knowledge of professional subjects.

According to the curriculum the fourth-year students study a number of subjects in linguistics, applied linguistics, literature, culture, have sufficient background knowledge and an appropriate level of language proficiency to comprehend articles selected according to scientifically substantiated criteria.

As reading articles can be quite challenging, students will have to learn to employ a number of cognitive, metacognitive and compensation strategies which can be further used in language learning and future profession activities.

The **topicality** of the research is based on the following factors:

- the necessity to improve philology students training by focusing attention not only on language instruction but rather on mastering both the language and the content matter of other professional disciplines;
- the importance of acquiring academic reading comprehension skills to perform professional duties on an appropriate level;
- lack of investigations in the field of teaching academic reading to philology students.

Relationship with academic programs, plans and themes. The topic of the dissertation is directly related to the research topic of Institute of Philology of Taras Shevchenko National University of Kyiv “Languages and Literature of the World: Interaction and Originality” (№ 11БФ044-01). The topic of the dissertation was approved by Academic Council of Institute of Philology of Taras Shevchenko National University of Kyiv (protocol № 5 from 20.12.2016).

The **purpose** of the research is theoretical substantiation, practical elaboration and experimental verification of the methodology of teaching reading English academic texts to philology students.

To achieve the purpose it is necessary to fulfill the following **tasks**:

1. Examine the problem of teaching foreign language reading in modern investigations, define the methodological and psychological foundations of teaching philology students English academic reading.
2. Determine effective strategies to be used for reading English academic texts.
3. Define basic characteristics of the research article and specify criteria for research article selection.
4. Determine principles, set stages, develop a system of exercises and tasks and a model of teaching reading English academic texts to philology students.
5. Verify experimentally the effectiveness of the suggested methodology and elaborate recommendations on teaching reading English academic texts to philology students.

The **object** of the research is the process of teaching reading English academic texts to philology students.

The **subject** of research is the methodology of teaching reading English academic texts to philology students.

The **hypothesis** of the dissertation: teaching English academic reading to undergraduates of philology should be based on reflectivity, integration with writing and speaking as well as with other professional disciplines and include:

- 1) three stages of developing expertise in reading comprehension (preparatory aimed at promoting students understanding of structural and linguistic features of academic discourse and developing strategic awareness, realization (pre-reading – activating background knowledge; developing lexical, grammatical, prognostic skills; while-reading – developing reading comprehension as well as study skills, post-reading – improving critical reading skills), integrative – developing abilities to use the information from the text and integrate information from different sources);
- 2) a system of exercises and tasks that consists of substages which correlate with the stages and include groups of exercises and tasks developed on the basis of academic texts selected according to the determined criteria;
- 3) a cyclical model of teaching philology students English academic reading.

To achieve the purpose of the investigation the following **methods** have been used:

- *theoretical*: critical analysis of pedagogical, psychological, linguistic and methodological literature, curriculum and programs of disciplines for philology students to determine theoretical foundations of the investigation; analysis of international English language tests to develop assessment criteria of academic reading comprehension and elaborate effective tasks; study of the fourth-year students' experience in academic reading; modelling of the process of teaching philology students English academic reading;
- *empirical*: survey of students attitudes, experience and expectations with the aim of developing the methodology of teaching philology students English academic reading, testing students' level of English academic reading competence; scientific observation of teaching process; experimental learning; qualitative and quantitative analysis of the data;
- *mathematical methods of statistics* to check the validity of the suggested methodology.

Scientific statements:

1. The effectiveness of English academic reading depends on the level of academic reading skills, academic reading comprehension skills, study skills, explicit and implicit knowledge and correlation of these components.
2. The effectiveness of academic reading is influenced by many factors among which the most important are: extrinsic and intrinsic motivation, extensive practice, subject knowledge, strategy use, social interaction, self-reflection, autonomy support, correctly determined individual learning goals, correctly organized instruction which presupposes development of reading comprehension skills in integration with writing, speaking skills and subject knowledge.
3. Besides traditional types of reading (scanning, skimming, reading for a detail) academic reading includes critical reading which incorporates complex thinking on analysing and evaluating author's meaning stated explicitly and implicitly, integrating the new ideas into the known ones, prioritizing them, evaluating the author's arguments, developing own ideas using writer's.

4. Teaching reading English academic texts to philology students should include three stages: preparatory, realization (pre-reading; while-reading, post-reading sub-stages), integrative.

5. A high level of academic reading competence can be achieved with the help of a system of exercises and tasks which includes sixteen groups of exercises aimed at promoting students understanding of structural and linguistic features of academic discourse; developing strategic awareness; activating background knowledge; developing lexical, grammatical, prognostic skills; developing reading comprehension as well as study skills; improving critical reading skills; developing abilities to use the information from the text and integrate information from different sources.

The scientific **novelty** of the research lies in the fact that it:

- theoretically substantiates and elaborates methodology of teaching reading English academic texts to philology students which presupposes three stages of teaching academic reading (preparatory, realization – pre-reading, while-reading, post-reading, integrative), a system of exercises and tasks which correlates with the stages, a cyclical model of teaching reading English academic texts to philology students;
- determines the structure of academic reading competence and requirements to its level for philology students, the criteria of academic texts selection;
- further studies effective academic reading strategies.

Practical significance lies in the selection and organization of the materials to teach philology students English academic reading, the formation of complexes of exercises, implementation of the suggested model in university educational process, development of methodological recommendations for teaching philology students English academic reading. The materials of the dissertation can be used for teaching future philologists, developing programs of disciplines, professional advancement.

The main ideas and results of the dissertation have been implemented in an academic practice of Luhansk Taras Shevchenko National University (certificate № 3251 from 15.10.2015), Kramatorsk Institute of Economics and

Humanities, Poltava University of Economics and Trade (certificate № 05–30/243 from 27.05.2016).

The results of the dissertation were presented at the international scientific linguistic conference “Language: classical – modern – postmodern” (Kyiv, 22 November, 2013), international scientific conference “Modern philology: paradigms, directions, problems” (Kyiv, 9 October, 2014), international scientific-practical conference “Managerial competences of university teachers” (Kyiv, 28 February, 2014), international scientific-practical conference “Higher Education of Ukraine in the Context of Integration to European Educational Space” (Kyiv, 24-26 November, 2016), Leonardo da Vinci IX international scientific-practical conference “Problems of Empirical Investigations in Psychology and the Humanities” (Kyiv, 21-22 January, 2017); Ukrainian scientific conference “Philological science in information society” (Kyiv, 10 April, 2014), Ukrainian scientific readings “Spirit of new time mirrored in a word and text” (Kyiv, 8-10 April, 2015).

Publications. Main ideas of the dissertation are presented in six publications, among which: four articles issued in recognized journals in Ukraine, an article published in a foreign journal (Baghdad, Iraqi) and an international conference abstract.

Structure of the dissertation. The dissertation consists of 323 pages; includes a preface, three chapters, conclusions, references (273 sources), appendices A–G, 19 tables, 7 figures.

CHAPTER 1

THEORETICAL FOUNDATIONS OF TEACHING READING ENGLISH ACADEMIC TEXTS TO PHILOLOGY STUDENTS

1.1. The problem of teaching foreign language reading in modern investigations

The development of international relations of any country demands training highly qualified philologists who will be able to engage in cooperation with foreign partners, serve as mediators of cultures demonstrating high levels of foreign language skills.

Reading is one of the four language skills and presupposes getting information from different types of texts. So to perform professional duties properly it is extremely important for future philologists to master reading skills on an appropriate level.

The aim of the section is to analyze modern studies on teaching reading and define progressive ideas to be used in developing the methodology of teaching academic reading skills to future philologists.

Reading in a second language has had an interesting history. For a long time it was the only purpose for learning a foreign language. For example, A. P. R. Howatt claims that in the 19th century Europe it was “a more practical and useful objective than learning to speak” [139, p. 294]. The same situation was observed in the USA which is proved by the fact that at the beginning of 20th century the National Education Association’s Committee of Ten declared reading the only goal of foreign language instruction in American schools [66, p. 48] only for the most talented students who were supposed to reach the level approximate to the one in the mother tongue [88, p. 167]. After the Second World War the situation changed dramatically as the oral approach to language gained the dominant position, and reading became a means (which was regarded to be especially useful for understanding grammar) rather than a goal of a foreign language learning [67, p. 1].

Nowadays reading is regarded both as an objective and a means of mastering a foreign language.

There are different definitions of reading (see table 1.1).

Table 1.1

Definitions of reading

Carroll J. B., 1964	reconstructing “a reasonable spoken message from a printed text, and making meaning responses to the reconstructed message that . . . parallel [responses] to the spoken message” [78, p. 62].
Urquhart S., Weir C., 1998	“dealing with language messages in written or printed form” [236, 1998, p. 14]. “the process of receiving and interpreting information encoded in language form via the media of print” [236, 1998, p. 22].
Koda K., 2004	“a complex, multifaceted pursuit requiring the continuous deployment and integration of multiple operations . . . ”; “a constellation of interfaced capabilities, ranging from mechanical mappings to more sophisticated conceptual manipulations, such as reasoning and inferencing” [155, p. 227].
Smith F., 2004	“thought stimulated and directed by written language” [224, p. 27].
Wolf M., 2007	“a neuronally and intellectually circuitous act, enriched as much by the unpredictable indirections of a reader’s inferences and thoughts, as by the direct message to the eye from the text” [247, p. 16].

Analysing the suggested definition we can see that a huge step has been made from understanding reading as the process just dealing with messages to recognizing it as a thought-provoking intellectual act which depends on the reader’s experience, knowledge, thoughts, ideas etc.

To provide our own definition of reading it is necessary to better study the concept. With this aim it is beneficial to analyse the recent research in the field that is relevant to the topic of the investigation.

Much attention in modern research is paid to the bottom-up and top-down reading – the distinction offered by K. S. Goodman [117]. In bottom-up processing, readers first recognize a variety of “linguistic signals (letters, morphemes, syllables, words, phrases, grammatical cues, discourse markers, etc.) and use their linguistic data-processing mechanisms to impose some sort of order on these signals” [144, p. 106]. Such operations require a deep knowledge of the language and are sometimes compared with operations performed by a scientist examining with a microscope or a magnifying glass details of some phenomenon [144, p. 106]. Bottom-up reading starts at the “bottom” level of text structure, and moves “upward” to phrases, sentences, paragraphs, and chunks of written discourse [132, p. 17].

A top-down strategy presupposes using previous knowledge and assumptions as the reader goes down from the general meanings to the specific ones of the text [144, p. 106].

Those who favour top-down reading, emphasize that the human memory and visual system can process, store and retrieve a limited amount of information which makes it impossible for bottom-up processes work efficiently while reading complicated texts [132, p. 24].

However, a half-century ago many scientists considered bottom-up methodology to be the most effective. Reading started with learning symbols, grapheme-phoneme correspondences, syllables and lexical recognition. Later it was proved that a combination of top-down and bottom-up processing, which is often called “interactive reading”, is most effective as both methods have numerous advantages. At first a reader adopts a top-down approach to predict meaning, then shifts to the bottom-up approach to check whether his assumptions were right [144, p. 106]. So the methods are not dichotomous and can be regarded as overlapping. The dominance of a particular method depends greatly on the text itself, language proficiency of the reader and learner’s goals. In general students should be taught and encouraged to use both methods.

Many researchers have attempted to understand the reading comprehension process and created different models of reading which in general are viewed as metaphorical models (bottom-up, top-down, interactive) and specific models (Interactive Compensatory Model, Word Recognition Model, Simple View of Reading Model, Dual-Coding Model, Psycholinguistic Guessing Game Model etc.).

Bottom-up models as described above assume that the reader mentally translates the information step-by-step and compares it with his/her own background knowledge. The reader “processes each word letter-by-letter, each sentence word-by-word and each text sentence-by-sentence in a strictly linear fashion” [123, p. 25]. We can agree with the position of some scientists [123, p. 25] that the view is too extreme as not all the readers read this way; however, it reflects: a) the process of reading texts that are challenging to readers; b) the importance of word recognition and understanding grammar structures; c) the way inexperienced or struggling readers cope with the text.

Top-down models suggest that a reader usually has some goals and expectations about the information in the text and reading the text he/she directs the eyes to the most likely places where useful information can be found and confirms or rejects such expectations. Inferencing and student’s background knowledge are the most important factors in the model [123, p. 25]. In our opinion, the model can work if the reader knows what to expect and what to look for. Besides, such reading is typical of more experienced and proficient readers. However, often students cannot have expectations about all the information in the text which makes the model not complete.

Interactive models seem to be compromising as they combine useful ideas from bottom-up and top-down views. The main processes involved are efficient word recognition, solid background knowledge which is an important contributor to text understanding, inferencing and predicting further linguistic means and information. Though the model is criticized and claimed to be self-contradictory as automatic word recognition cannot operate with much interference from background information or inferencing [123, p. 27], we think that much depends on the purpose of reading which defines the processes emphasized.

The Interactive Compensatory Model (K. Stanovich [227]) was first suggested in the late 1970s, has been proved by a number of studies and is recognized now. According to the model: some of the reading processes are automatic and others – less automatic, the first operate relatively independently and the latter interact regularly, reading difficulties demand more interaction and compensation of different processes to allow comprehension to continue (e.g., if the reader does not know some word, then context information is incorporated to compensate for inefficient word-recognition process). The model suggests that proficient readers do not depend on the context facilitation as they have less difficulties with word recognition [122, p. 96]. In our view, the idea of compensation processes should be taken into account in teaching reading in the way that students should be taught to use context clues, background knowledge and other factors that can compensate for lack of skills. In other words, students' strategic awareness should be built.

The Word Recognition Model of M. Seidenberg and J. McClelland [222] is widely supported as it provides a reasonable explanation for fluent reading word recognition process. It is necessary to explain that though the model deals with word recognition, most scholars recognize it as a key component of cognition that is specific to reading [122, p. 101]. According to the model, which is of bottom-up nature, “information in our brains is composed of millions of bits of neuron networks that create larger neural networks representing a given lexical item, or a given concept, or non-verbal information. As we encounter words with similar meaning and use multiple times, the neuron network reassembles itself again with slightly greater facility”. Recognising the same word forms many times readers develop automaticity [123, p. 28]. The model can be viewed as an explanation of one of the factors of effective reading comprehension rather than a reading comprehension model itself. But still it presents a well-grounded view on how words are usually recognized and emphasizes the necessity of reading practice. Besides, it proves the fact that word recognition is critical to effective reading and thus emphasizes the importance of developing lexical skills.

According to *the Simple View of Reading Model* (W. Hoover and P. Gough [135]), reading comprehension is a combination of word recognition abilities and general comprehension abilities (typically measured by listening comprehension). The proponents of the model recognize the role of other factors, but the central idea is that reading comprehension (R) is first of all word recognition – decoding (D) multiplied by comprehension (using listening comprehension) (C): $R=D \times C$. The score obtained can be used to evaluate students' reading comprehension abilities. The model explains individual differences in reading abilities, but still raise the questions how decoding and comprehension should be measured, how the scores obtained be combined, and what other factors influence reading abilities (fluency, motivation, background knowledge, use of strategies, purpose etc.) [39; 122, p. 98; 153]. However, the model emphasizes the necessity of integrative approach in teaching reading as reading comprehension is closely connected with listening comprehension.

The Dual-Coding Model [216; 217; 218], which has grown in popularity in recent years, is based on some major ideas from the Interactive Compensatory Model, Simple View of Reading Model and Verbal Efficiency Model (C. Perfetti [200]). It assumes the extreme importance of linkage between two separable cognitive systems – the verbal (prose) and visual (e.g., imagery, visual representations etc.) information. If they match, the reader demonstrates better comprehension [216] which is built from linguistic and visual input [197; 198]. The views have been proved by research on multimedia learning [173]. Thus, the combination of verbal and visual input is very important in developing reading comprehension.

Finally, *the Psycholinguistic Guessing Game Model of Reading* (K. Goodman [117; 118]) is based on top-down approach and is generally recognised as being wrong in its predictions [120; 207; 122; 227]. This model highlights the idea that reading comprehension includes hypothesising, sampling and confirming hypothesis based on background knowledge, expectations, analysing features of the text and deriving context information. Besides, the model suggests that the reading process is similar on all proficiency levels and across all languages, and that all reading abilities transfer automatically from language to language [123, p. 30]. Some arguments should be

taken into consideration. Firstly, good readers make less use of context and hypothesizing than poor readers [207; 227] and secondly, reading abilities can not transfer easily through languages and they are not the same in different languages. However, as W. Grabe claims, the model can be useful in understanding early stage of reading development [123, p. 30]. Besides, guessing meaning of words can be a useful strategy, but proficient readers who know words do not do it. Besides, guessing the meaning of the whole text is an efficient pre-reading strategy, but not the reading process itself.

All the mentioned models make some contribution to understanding reading comprehension process. As for our investigation we can make the conclusion about the necessity of developing linguistic and background knowledge, extensive reading practice and focus on visual information and means of its visualization (both during and after reading to better understand the information), developing lexical skills and applying integrative approach to teaching reading.

Reading comprehension means making sense of the text including word level, sentence level, whole-text level and connecting the message to the reader's knowledge of the world [225, p. 21].

For second-language readers the word level means attaching a new oral/written representation to a concept that already exists from the native language or sometimes to learn both the concept and the new word [67, p. 13]. So lexical skills are extremely important for successful foreign language academic reading.

H. Galyzina in her dissertation studies and points out the importance of forming grammar skills for effective academic reading as the more complicated the idea is, the more skills are needed to get it from the linguistic forms [8, p. 29]. The author studies teaching reading to technical universities students and proves the importance of analyzing typical texts and concentrating on typical grammar forms. We fully support the idea of text analysis with the aim of further focusing on its main peculiarities and predicting possible difficulties, but want to mention that philologists have to acquire all the grammar phenomena so presumably they will not have great difficulties in understanding grammar structures.

As second-language readers have not only to automatically control linguistic forms, but also deal with cultural differences, E. B. Bernhardt reasonably concludes that “reading has been characterized by both cognitive and social dimensions and hence as a sociocognitive process, yet one firmly rooted in transmission and information exchange” [67, p. 15].

It is necessary to remember that making sense of the text depends on the reader’s knowledge of the world [225, p. 21]. To comprehend the text the reader uses the knowledge and experience he has as well as emotions the text evokes. That is why reading is always an interactive process as it presupposes interaction between “linguistic knowledge and knowledge of the world” [144, p. 106–107] as well as using and reflecting on the information the text presents for various purposes (for example, to achieve goals, develop knowledge and effectively participate in society).

S. Barry and A. A. Lazarte [63] studied reading effectiveness of high school learners of Spanish from high-knowledge and low knowledge backgrounds. The results of the investigation showed that high-knowledge readers were able to comprehend complicated texts better than low-knowledge learners.

Similar investigation was conducted by C. Y. H. Chan. Studying the importance of prior knowledge and the influence of language proficiency on reading comprehension of Chinese and Hong Kong learners of English, the scientist found that language proficiency is a more powerful variable which compensates for a lack of learner’s prior knowledge [84].

So we can make the conclusion that much attention should be paid to students’ purposeful four language skills development (as reading skills are closely connected with other ones), previous knowledge activating, careful text selection which considers students’ linguistic knowledge and knowledge of the subject, pre-reading activities that prepare them for reading a particular text as well as post-reading tasks with the aim of analyzing the author’s purpose, following the author’s line of reasoning, reflecting on the main ideas, comparing the information from the text with what they already know, motivating students to do further activities based on the text.

Much attention in scientific literature is paid to types of reading – intensive and extensive.

Intensive reading is based on the grammar-translation approach. Learners translate the text sentence by sentence into the first language and explain difficult pieces to better comprehend it. Besides, intensive reading is used to show how linguistic means contribute to the communicative purpose of the text which can be a good preparation for further activities (usually writing tasks for academic texts). As I. S. P. Nation reasonably claims, the major principle determining the usage of such teaching should be focusing on items that will occur in a wide range of texts [191, p. 26].

A number of scientists proved the effectiveness of first language mental translation when confronting a challenging text [87; 146] with word-related and idea-related difficulties [223] or learning new vocabulary from reading as in such a way the reader uses the combined resources of the two languages [123, p. 110-111].

According to I. S. P. Nation intensive reading should focus on the following aspects:

1. Comprehension (intensive reading should be aimed at understanding a particular text).
2. Vocabulary (learners should pay attention to useful words, their meaning and usage; words from the text can be subsequently worked at).
3. Grammar (difficult grammatical phenomena should be drawn attention to, explained and assigned for later study).
4. Cohesion (learners can examine how different words are used to refer to the same idea).
5. Genre features (intensive reading should focus on genre peculiarities, namely, what the communicative purpose of the text is and what features are used to achieve it (vocabulary, grammar, cohesive features and information)).
6. Strategies (intensive reading can be used to develop useful reading strategies (for example, practising step by step how to guess from the context, simplifying difficult sentences, taking notes etc.); reading intensively students can also get training in “integrated packages of strategies”) [191, p. 26].

Extensive reading received attention from researches and classroom instructors in the late 1960s–early 1979s. Since 1990s extensive reading has been focused on many scholars and teachers. The investigations demonstrated close relation between motivation and the amount read (K. E. Cox [91], J. H. Wang [242]).

Reading extensively, students are interested in what they are reading and focus their attention on the meaning and ideas rather than on learning linguistic features of the text and analyzing its genre specifications [191, p. 50].

Extensive reading is considered by S. Krashen [156] to be the key for students to develop reading ability, linguistic competence, expand vocabulary, improve spelling and writing. The scientist supposes that programs should pay much attention to teaching extensive reading which does not mean neglecting intensive reading, but strengthening the positions of extensive reading which also has a lot of advantages among which J. S. Hedgcock and D. R. Ferris point out the following: improving comprehension skills, developing automaticity, activating background knowledge, expanding vocabulary and grammar knowledge, developing production skills (speaking and especially writing), promoting confidence and motivation [132, p. 211]. As for vocabulary learning through extensive reading not everything is so clear. Some studies have not found evidence that extensive reading leads to significant vocabulary expansion [138; 243]. However, numerous research [137; 138; 251] have proved that extensive reading is accompanied by some vocabulary learning. Developing M. Horst's idea [137, p. 42–43]) we can state that extensive reading helps to a) acquire automatic sight vocabulary which is crucial for fluent reading, b) encounter many new words, c) meet familiar words and practice their recognition (it has been proved that there should be minimum 10-12 exposures for word learning [133; 251]), d) meet words in new contexts, e) encounter different meanings of words.

In general, the analysis of the recent research has demonstrated that continuous and consistent guided extensive reading usually lead to significant development of reading abilities.

The analysis of modern scientific literature [40, p. 43–44; 92, p. 7–8; 132] shows that extensive reading is considered to be effective under the following conditions:

1. Students read as much as possible, both in and out of the classroom. The latter dominates and is done without teacher help.
2. There is a great variety of materials on a wide range of topics available to students which will encourage learners' reading for different purposes.
3. Students select what they want to read and are allowed to stop reading material which does not seem interesting to them. So students are given freedom and responsibility to choose or find materials. However, materials may be suggested by the teacher at least partially.
4. The purposes of reading are related to general understanding, pleasure and getting information. It is not demanded that students should understand every word. These purposes as well as students' interests should be taken into consideration in material selection.
5. There are few or no exercises after reading.
6. Reading materials correlate with the linguistic competence of the students which means that dictionaries are rarely used because constant looking up words makes fluent reading difficult.
7. Reading is outside class (done when and where the student chooses), silent and individual, at the learner's own pace.
8. Teachers inform students on the requirements and goals of the program, explain the methodology, keep track of each student reading, and guide learners in reading process.
9. Students may read several texts on the same topic – learners “will bring more background knowledge to each new text they read” [40, p. 43].
10. Extensive reading is not used deliberately to train specific reading strategies or skills though it provides students with an opportunity to practice effective strategies and demonstrate skills without focusing on them.

Pichette F. [203] found that as readers advance in proficiency, the stronger the relationship between amount of reading and reading comprehension becomes which proves the necessity to encourage students' extensive reading.

It may seem that an extensive reading is much more appropriate for students and should dominate in university programs. However, not everything is so clear. Scientists [61; 92; 156] recognize that academic reading can be extremely challenging, and second language students have to master special skills for academic text reading [92, p. 45]. B. S. Mikulecky makes a reasonable conclusion that there should not be an "exclusive extensive-reading approach for college-level reading courses, but rather ... an integration of intensive and extensive reading" [181].

B. S. Mikulecky suggests that teachers should encourage extensive reading by assigning it as a homework (students should complete a certain amount of self-selected reading per week), incorporating silent reading as a part of a lesson alongside with intensive reading, provide class discussion on its results and main ideas (e.g., through individual or group oral presentations), assign students to write a summary of what they have read, combine extensive reading with writing (in this case reading is seen as a source of ideas and as a model for students to analyse and imitate in their writing), equip students with effective linguistic tools [181].

As for future philologists, we think that both intensive and extensive reading of academic texts should be practiced. Intensive reading should be done to check student comprehension of a typical text, help them understand it better, learn useful words, analyze ways of referring ideas in academic texts, study genre peculiarities and apply different strategies. Extensive reading is implied with the aim of getting useful information which can be used subsequently. The above-mentioned conditions can be applied for organizing students' extensive reading of academic texts. However, some of them need further analysis. We consider it useful to practice post-reading activities aimed at teaching students to use the information learned and developing their productive skills. Besides it seems reasonable to practice some strategies as effective extensive reading itself includes a number of useful strategies (for example, using

context to guess the meaning, taking notes to track the author's line of argument etc.). Using them will enable students to read texts beyond their linguistic competence.

Efficient readers use a number of strategies. Strategic use of language has a long history which is connected with the studies of A. Cohen, R. Oxford and others. Some of them tried to refer to specifically reading strategies which help readers understand the structure and assess textual material, enhance attention memory, activate metacognition and motivation, improve language skills, expand subject knowledge [132, p. 41]. For example, A. Allan [52], B. Oded and J. Walters [192] examined the effectiveness of two types of reading analysis – text summary and making a list. The investigation showed that those who wrote summaries demonstrated better understanding and deeper insight into the problem of the texts than those whose task was to create a list of ideas of the text. The investigations demonstrated that writing summary can be an effective strategy which helps the reader to focus on the main ideas of the text, examine it more thoroughly.

One more study, which proved the effectiveness and importance of reading strategies, was conducted by G. Taillefer and T. Pugh [231]. They examined reading strategies of professional students reading in English as a second language. It was concluded that the readers transferred L1 comprehension strategies into the L2 reading and that good strategies can compensate for weaker L2 language proficiency [67, p. 48].

The analysis of the scientific literature [144; 156; 189] showed that the most typical are the following reading strategies some of which may refer to bottom-up processing and others – to top-down:

- identify the purpose of reading and the type of reading (skimming, scanning etc.);
- for rapid comprehension use silent reading techniques;
- skim the text to understand main ideas, then read it more in depth;
- scan the text to look for specific information;

- to understand the text better, use semantic mapping which will help to provide some order to the chaos, follow the line of argument or memorize the information;
- guess from the context (a meaning of a word, discourse relationship, implied meaning, cultural reference and content messages);
- analyze vocabulary (prefixes, suffixes, familiar roots, grammatical and semantic context);
- distinguish between literal and implied meanings;
- search for keys;
- activate linguosociocultural and linguistic knowledge;
- make predictions and inferences;
- practice asking and answering questions on the text;
- practice narrow reading (reading texts on a single topic or of a single author which helps readers to adjust to the repeated vocabulary, the topic and the author's style).

However, the list is not sufficient for challenging academic reading and needs to be studied more in depth.

Reviewing the research on foreign language academic reading, J. Fitzgerald [105] came to the conclusion that the more proficient a foreign language reader becomes, the more he uses strategies which a proficient first language reader applies. The statement is very important for teaching academic reading as it emphasizes the necessity of activating first language reading strategies and the analysis of how they can be applied in foreign language reading.

Thus, the above-mentioned investigations proved the necessity of encouraging strategic reading which should be taught through direct instruction and the analysis of the first language strategies as it would be naive to expect students to develop a range of effective strategies themselves. Subsequently learners will be able to select appropriate strategies according to the type of the text and reading goals as well as individualize their strategy repertoires. Effective reading includes developing other types of strategies – memory and cognitive strategies (for example, summarising,

visualizing, etc.), metacognitive strategies (for example, planning, taking notes, self-evaluation, etc.) and compensation ones (for example, guessing using context, paralinguistic means etc.) which should also be taught and encouraged. Reading strategies will be analyzed more in depth in § 1.3.

The analysis of scientific literature showed that scholars [67; 122; 123] recognize the exceptional role of the reader who brings a number of different things into the reading process, including purposes for reading (e.g., for survival, information/learning, or pleasure), background (the influences of family, school, and culture or subculture of origin), attitudes toward reading and literacy in general (which may be shaped both by purpose and background), and prior knowledge (linguistic, content, and rhetorical) related to the information in the text. In addition, readers bring individual differences in personality, learning styles and strategies, reading strategies, and life experience. Thus, a group of readers encountering the same text at the same point in time (e.g., in a class or a book group) will not have identical experiences with reading the text or the same reactions to or interpretations of it. Even the same reader interacting with the same text at different points in her life will experience it differently because the reader herself has changed over time. The mentioned results prove the importance of individual approach to the learners.

A very important conclusion was made by Bernhardt E. B. who claimed that at the higher levels of language learning the role of first-language-based knowledge is perhaps even more powerful than at lower levels because the nature of the upper-level knowledge is much more dense, complex, and complicated [67]. So an ability to rely on first-language knowledge is indispensable, which will be further analysed.

A range of valuable ideas are presented in the dissertation of A. Rubtsova that studies the problem of teaching future philologists productive foreign language reading in self-directed learning. The author makes an important conclusion (which can be fully applied to our investigation) about the necessity of usage problem-based tasks which develop creativity, reflection, personal qualities and enable individual approach to students [29].

Investigating the acquisition of strategic competence in reading H. A. Kuznetsova made a very important conclusion about the exceptional role of reflection in developing a strategic reader [16] which means that students should be encouraged to analyse their performance, methods and materials used and seek ways to perfection. In teaching fourth-year philology students, who are supposed to be quite autonomous, it is very important to manage reading process in the way that stimulates students' reflection on their personal goals, ways to achieve objectives, their strong and weak points and overall results.

Focusing on teaching professional reading first-year philology students, E. V. Pomanisochka [25] has come to the conclusion that the topic of professional texts and the time when they are read should correlate with the material learnt on subjects of specialization which will develop student's intrinsic as well as extrinsic motivation.

Modern scientific literature analysis on the topic enabled the conclusion that teaching future philologists English academic reading should be based on the following ideas:

1. Developing grammatical and especially lexical skills which are essential for reading comprehension.
2. Academic texts analysis with the aim of further focusing on their main features and predicting possible difficulties which students can face.
3. Activating students' prior knowledge.
4. Careful text selection with the focus on students' linguistic and subject knowledge.
5. Focus on visual information and means of its visualization.
6. Practicing pre-reading activities that prepare students for reading a particular text and post-reading tasks with the aim of analyzing the author's purpose, following the writer's line of reasoning, reflecting on the main ideas, comparing the information from the text with the one learned before, motivating students to further activities based on the text.

7. Practicing intensive and extensive reading of academic texts. Intensive reading should be done to check students comprehension of a particular text, help them understand it better, learn useful words, analyze ways of referring ideas in academic texts, study genre peculiarities and apply different strategies. Extensive reading is applied with the aim of getting useful information which can be applied subsequently as well as practicing effective strategies.

8. Teaching strategies (reading, memory and cognitive, metacognitive and compensation) through direct instruction. Encouraging learners to select appropriate strategies according to the type of the text and reading goals, individualize their strategy repertoires.

9. Problem-based learning with the aim of developing creativity, reflection, personal qualities.

10. Individual approach to learners.

The above-mentioned ideas will be used in methodology of teaching philology students English academic reading.

The next step is to analyse methodological and psychological foundations of teaching academic reading to English philology students.

1.2. Methodological and psychological basics of teaching reading English academic texts to philology students

The major objective of teaching reading is the formation of reading competence which can be defined as the ability to read authentic texts of different genres and types demonstrating different levels of understanding [22, p. 370] depending on the objectives of reading and the type of the text.

To develop the methodology of teaching philology students English academic reading it is necessary to analyse the components of reading competence among which scientists distinguish skills and knowledge [22, p. 370].

Skills are defined as:

- “an acquired ability to perform well” [97, p. 298];

- “essential academic habits” [43, p. 296];
- “an acquired ability that comprises interrelated yet separable (and arguably teachable) subskills” [67, p. 36];
- an ability to solve communicative tasks in new situations [24, p. 96].

The last definition reflects the essence of the notion and regards skill as an acquired ability to solve communicative tasks in new communicative situations.

It is necessary to analyse reading skills and determine which ones are of utmost importance for effective academic reading. W. Grabe and F. L. Stoller think that reading skills “represent linguistic processing abilities that are relatively automatic in their use and their combinations (e.g., word recognition, syntactic processing)” [123, p. 15]. In our view, the definition doesn’t demonstrate the peculiarities of the whole range of skills and focuses only on lexical, grammar skills etc.

Proctor R. W. and Dutta A. claim that reading skill is “goal directed,” “highly integrated and well organized,” “acquired through practice and training,” and gradually automatized [210, p. 18]. In general we agree with the view, though it may seem doubtful that all reading skills can be fully automatized. As B. C. Mikulecky [181] we think that proficient readers demonstrate unconscious and automatic usage of most of the reading skills, but not all as, for example, critical thinking skills which are necessary for academic texts comprehension or in case of dealing with a challenging text when readers employ skills consciously and strategically.

Mikulecky B. C. regards reading skills as “cognitive processes” which readers use to understand a text [181].

To specify skills future philologists should possess to read academic texts efficiently, it is necessary to analyse the academic reading process.

According to W. Grabe and F. L. Stoller, fluent reading is a rapid, efficient, interactive, strategic, flexible, evaluating, purposeful, comprehending, learning and linguistic process [122, p. 11]. Word-reading efficiency, vocabulary development, text-reading ease, comprehension, use of strategies – all these are constituents of fluent reading [122, p. 290–291].

Fluent reading is always a *rapid* process (depending on the purpose a good first language reader reads different text at average rate between 200 and 300 words per minute). Different processes are to function *efficiently*, in coordination with each other, and some of them must be carried out automatically [71; 122, p. 11]. Reading is *interactive* as, firstly, different processes are carried out simultaneously (readers recognise words rapidly and keep them active for some time in working memory [57; 58; 59], analyse the structure of sentences to understand their meanings, make conclusions about main ideas etc); secondly, information from the text interacts with information (linguistic and background) activated by the reader from long-term memory. W. Grabe and F. L. Stoller expressed a very important idea that linguistic and background information from a long-term memory is essential for text comprehension [122, p. 11-12] which emphasizes the importance of expanding linguistic and content knowledge. Further we will analyse which linguistic information is of greatest importance for effective academic reading.

The reading process must be *strategic* as the reader needs to deal with different skills, encounter difficulties, monitor comprehension, seek solutions, correct imbalance between text information and reader knowledge, shift goals. Changing purposes and monitoring comprehension demands the ability to read *flexibly*. The reader has to *evaluate* if the information being read is coherent, important, useful, interesting, meets the reader's goals. Reading is always *purposeful* as, firstly, students usually have some purpose set internally or externally and, secondly, they have to read differently depending on the reading purposes. In academic settings, where students usually learn from texts, reading is always a *learning* process [122, p. 12] from which philology students learn some professional information and develop useful skills. As for philology students academic reading is always a *linguistic* process as readers have to understand different words, structures etc., analyse them.

The basic requirement for fluent reading comprehension is *automatic word recognition*. For example, first language readers can recognise: 98–100 per cent of all words in a text (at least at some basic meaning level), four or five words per second spending about 230 milliseconds per word [207]. Following W. Grabe and

F. L. Stoller's view on similar first and second language reading abilities at advanced levels [123, p. 4] the given data seem to be of equal importance for fluent second language readers. For such readers word recognition is very fast and automatic (when an eye sees a word, the reader accesses its meaning immediately) which requires a lot of practice in reading. It also proves the necessity of expanding student vocabulary and forming strong lexical skills which mean that the words are well represented on orthographic, phonological, semantic and syntactic levels [122, p. 23]. The last statement is argued by the data which demonstrate that to understand a text properly a reader should recognise at least 95 per cent of the words, recognition of 98–99 per cent of the words in a text lead to even a greater comprehension [159; 190]. It has been calculated that 95 per cent coverage of most texts requires a recognition vocabulary between 10,000 and 15,000 words; 98–99 per cent coverage – about 36,000–40,000 words [219; 226]. According to W. Grabe and F. L. Stoller a realistic recognition vocabulary for more advanced second language readers is above 10,000 words [123, p. 137] which seems quite reasonable and accessible. So besides mastering the vocabulary students should be taught to incorporate different strategies, encouraged to improve background knowledge to compensate for lack of proficiency to fully comprehend challenging academic texts.

A fluent reader extracts grammatical information from words taken together (e.g., word order information, subordinate relations between clauses), define the meanings of words that have multiple meanings out of context [123, p. 16]. However, *rapid and automatic syntactic processing* is less obvious for second language readers in comparison with word recognition. W. Grabe and F. L. Stoller define two main reasons for it: 1) most students master second language grammatical structures before they become fluent readers; 2) to develop automaticity in using information from grammatical structures second language students need, first of all, countless hours of practice [123, p. 18].

As for the fourth-year students, who have already mastered or at least are supposed to have mastered all grammatical structures, teaching academic reading should be focused most on lexical skills development and intensive practice through

both intensive and extensive reading. However, it does not mean neglecting grammatical structures. It seems reasonable to analyse grammatical features of academic texts to define most difficult structures typically used in academic discourse with further focus on them to promote automatic syntactic processing.

There is one more automatic reading process – *combining word and structural meanings into units*. The recognised words, that are kept active for a couple of seconds, along with grammatical information and background knowledge or what has been read before help a reader to make sense. Connecting such meaning units, students understand central ideas if they are repeated several times [123, p. 18].

The three above-mentioned processes should function relatively automatically for the fluent reader, otherwise the reading comprehension process slows down and the reader may misunderstand the text or it becomes very difficult for the reader to maintain comprehension [123, p. 19]. We can make the conclusion that on this level (which is usually called low-level, but should not be underestimated) reading skills can be automatic.

Working memory plays an exceptional role on the level as it supports processing for word recognition, stores activated words, carries out syntactic processing and stores information, deletes unnecessary one, combines information to build comprehension [122, p. 36].

There are also higher-level processes (in contrast to the previous ones which are considered lower-level ones) that refer to what we usually think of as reading comprehension. The most “fundamental” of them is the *coordination of main and supporting ideas of the text* to build the text model of comprehension. As new meaning units are added, the ideas that are used repeatedly and are logically connected to other information are considered to be the main ideas of the text. Under the influence of background knowledge, goals, motivation, task, text peculiarities, reader attitudes toward the text, feelings, expectations etc. the reader starts to *interpret the information from the text*, design a possible direction of the reading [123, p. 20-22].

Not all of the described processes are always of equal importance. The purpose of reading defines which reading process will be greater emphasized. For example, reading for general comprehension entails coordination of main and supporting ideas as well as text interpretation; finding specific information focuses on word recognition and background knowledge anticipation of what to look for; reading to learn presupposes creating “an accurate text model of comprehension”, and then logical interpretation which integrates new knowledge with existing one [123, p. 23].

In contemporary investigations text model is clearly distinguished from situation model. The former reflects what the text itself is signaling while the latter is a result of combination of reader's targets, the interpretation of the writer's ideas, the text information and reader's subject knowledge. Such two level-processing text model combines the author's view and the reader's interpretation of it. Depending on the purpose of reading the emphasis is made either on the text model or on situation model [122, p. 46–47]. For example, if the readers task is to learn the information from the article, first of all text models should be built and reinforced. However, if the purpose is to integrate information from different sources, the situation model should dominate.

Higher-level processes are also closely connected with working memory, the major component of which is executive control recognized as central to comprehension processing [58; 77; 94]. It carries out main attentional processes, stores information during reading and suppresses irrelevant information or the information that is not needed any more, controls shifting attention [112; 184].

Four conclusions become clear in terms of the information presented:

1. Skills which are typical of lower-level processes can be relatively automatic.
2. Skills of upper-level processes are not automatic.
3. Reading comprehension processes of fluent readers work simultaneously.
4. The purpose defines reading processes emphasized.
5. Both low-level and high-level processes are closely connected with working memory.
6. Difficulties may arise when readers do not possess sufficient linguistic resources (which means, first of all, the necessity of expanding student vocabulary on

the topic), do not have sufficient background knowledge (presupposes some preparatory activities before reading academic texts) or do not have enough reading practice. Such difficulties will surely occur at the beginning so a slow translation of at least the most difficult points should be utilized.

7. Reading academic texts students will have to build a text model which reflects what the text itself is signaling or a situation model.

8. The variety of lower-level and higher-level skills readers have to build proves the necessity of a great amount of reading practice.

Analysing identified by T. Hudson [140] four reading skill categories (decoding skills; fluency skills; comprehension skills; critical reading skills), we have come to the conclusion that the first two are typical of the lower-level processes while the other two – of the upper-level ones. We also fully agree with Bernhardt E. B. that the skills can be described separately, but functionally they are interrelated and interdependent [67, p. 36].

Our next step will be to determine skills which students will have to develop to read English academic texts efficiently.

B. V. Rosenshine [214] made a conclusion about seven subskill areas which are included into the above-mentioned four categories:

- information sequence recognition;
- recognition of words in context;
- identification of main ideas;
- decoding of details;
- inferencing;
- cause and effect recognition;
- comparing and contrasting.

The seven subskill areas have been subdivided by many scientists into detailed lists to help teachers set goals for foreign language learning. It is necessary to analyse those which are most relevant to the topic of our investigation.

Table 1.2 demonstrates a generalized view of Hedgcock J. S. and Ferris D. R. [132, p. 39] inspired by some expert sources [69; 100; 121; 123] on the components of reading competence and their development.

Table 1.2

Three sets of reading competence (by Hedgcock J. S. Ferris D. R.)

Reading Skills Development		
Name letters	Recognize contractions	Use a dictionary pronunciation key
Identify consonants and vowels	Divide words	Define high-frequency words
Read words on sight	Recognize synonyms, antonyms, and homonyms	Decode compound words
Recognize “silent” letters	Draw on and develop a rich working vocabulary	Use context clues to understand meaning
Recognize rhyming words	Understand polysemy (multiple meanings)	Recognize multiple phoneme–grapheme correspondences (“hard” and “soft” c)
Identify word roots and affixes (prefixes and suffixes, plural markers)	Recognize blends and consonant and vowel digraphs	
Reading Comprehension Development		
Categorize words and information	Modify incorrect predictions	Understand and use figurative language
Sequence words and information	Recognize and repair miscomprehension	Understand literary and academic forms
Follow directions	Integrate text information with existing schematic knowledge	Evaluate characters, narrators, authors
Read for information at a rapid speed	Identify tone or emotion in a text	Evaluate narrative settings
Retell a story	Generate inferences	Draw factual conclusions
Identify key words	Judge reliability of source	Distinguish fact from fiction and opinion
Identify main ideas	Compare and contrast	Recognize purposes for reading
Summarize	Judge propositional content	Shift purposes for reading as needed
Predict outcomes	Deploy strategies to monitor comprehension	Read critically

Reading Research and Study Skills		
Alphabetize	Use tables of contents, indexes, and glossaries efficiently	Use text-based, visual, and interactive electronic resources to collect and compile information; apply QUEST model (Question, Understand resources, Evaluate, Synthesize, Transform)
Cross-reference	Understand and synthesize information from various sources	
Use dictionary efficiently	Classify books and online sources by genre category	
Use encyclopedia efficiently	Use atlases, maps, graphs effectively	

The presented ideas are important for our investigation as they demonstrate a generalized view on the structure of reading competence and the classification of skills necessary for effective reading.

Judging from the table, the development of reading competence presupposes the development of reading skills (lexical, phonological and grammar), reading comprehension as well as reading research and study skills. In our opinion, the table does not provide the sufficient list of skills especially for academic reading which demands a variety of higher-level skills.

According to the table, J. S. Hedgcock and D. R. Ferris clearly distinguish reading skills and reading comprehension. The latter is, in our opinion, a broader category as it requires usage of interrelated skills such as fluency, efficiency, speed etc. and coordination of many processes during limited time [132, p. 37].

Reading comprehension reflects interaction between the text itself and reader's knowledge, abilities, skills, strategies etc. all of which shape comprehension [167, p. 111].

So we will distinguish reading skills and reading comprehension skills regarding the first one as those referring to the lower-level processes and the latter ones – to the higher-level processes.

The information, presented in Table 1.2, lacks clarity as, for example, some components from reading comprehension development section can be regarded as study skills (e.g., *Deploy strategies to monitor comprehension*, *Judge reliability of*

source etc.); some aspects are too general and need further explanation (e.g., *Read critically*), others do not have any reference to reading comprehension (e.g., *Retell the story*) and can be viewed as a task to check comprehension.

Academic reading incorporates some research and use of different strategies. That is why we agree with the authors who consider study skills a necessary component of efficient academic text reading. So study skills will also be specified in the thesis.

As it has already been mentioned, we support the view [140; 155; 165] that skills have a hierarchical character. Table 1.3 presents a three-level model of reading skills hierarchies [132, p. 40].

Table 1.3

A three-level model of reading skills (by Hedgcock J. S. Ferris D. R.)

Level 1	Level 2	Level 3
Decode print	Identify graphemes, syllables, words, word boundaries, phrases	Scan, fixate, anticipate, classify, test, match, verify hypotheses
Make sense of print	Assign meaning to words, phrases and sentences	Anticipate grammatical and semantic categories, match and verify hypotheses
Question print-based messages	Identify discrepancies among divergent messages and between text content and what is known	Retrieve information from long-term memory, compare, make inferences

The table demonstrates skills as those ranging from lower-level (e.g., making sense of print) to higher-level (e.g. anticipating, matching etc.) operations. We consider such an approach to be a useful one for understanding the process of reading and its teaching as well as for “developing curricular and constructing syllabi” [132, p. 40]. At the same time the following aspects should be taken into consideration:

1. The table does not contain the full range of reading skills and can be regarded as a schematic summary of reading skills hierarchy. As for academic reading, which demands a corresponding level of reading proficiency, students should deploy more skills.

2. Reading skills may “overlap within and across categories, frequently functioning interdependently” [132, p. 38] so reading skills can not be seen only in the strict hierarchical order.

There is another view according to which reading competence includes five skill categories classified hierarchically:

- determining the meaning of words (recognizing known words, connecting them to prior vocabulary knowledge, determining the meanings of unknown words);
- understanding sentence meaning (determining overall sentence meaning on the basis of sentence structure analysis in relation to previous sentences, experience, subject knowledge);
- understanding the situation implied by a text (building a situation model) which includes cause-and-effect relationships;
- building global text meaning (understanding gist and supporting details, recognizing organizational structure to guide one’s reading; identifying the main point of the text,, summarizing and evaluating the meaning of larger sections, identifying explicit information, drawing conclusions);
- understanding pragmatic meaning (identifying purposes for writing, analyzing content, organization, style and their relevance to the audience and situation) [238, p. 151–152].

The suggested classification is similar to the previous ones and demonstrates different levels of text comprehension. The first two categories refer to the lower-level processes and the other three – to the higher-level processes.

Thus, the analysis of scholars’ views on components of reading competence enabled the conclusion that to read effectively students should demonstrate an appropriate level of reading skills (lexical and grammatical), reading comprehension skills, study skills and corresponding knowledge.

The skills employed depend on why and how students read. According to W. Grabe and F. L. Stoller texts are read with the following purposes: to search for information, learn from texts, integrate information, write, search for information needed for writing, analyse and critique texts, for general comprehension. All these purposes are typical of academic and professional contexts. For example, students usually have to learn a considerable amount of information from a text which they have to read at a rather slow speed to comprehend it well (due to rereading and reflection which helps to build “rhetorical frames that organize the information in the text”), remember main ideas and important details, connect them to students’ background knowledge. Reading to integrate information requires critical evaluation of the information from the text and taking decision about its importance and how to integrate and compose the information from different texts and with what students already know [123, p. 6–7].

There are different types of reading. When a text is read just for specific information, it is called *scanning* which presupposes hurrying over most of the text until the necessary information is found. Students read with the speed of 400–500 (and up to 600 words per minute [132, p. 38]) and understand 40-50 % of information. Reading for gist or *skimming* is reading quickly through the text to get its general idea (for example, when it is necessary to decide whether to read an article or not) with the speed of 180–190 words per minute and understanding 70–75 % of the text. *Reading for a detail* students try to get the meaning out of every word and fully understand the text. The speed of reading is 50-60 words per minute [22, p. 377; 225, p. 22].

No matter how fast students may read depending on their purpose, when they are asked to memorise the material, their speed decreases to 138 words per minute [132, p. 37].

In academic settings usually six academic purposes for reading are usually distinguished. Apart from generally recognized three aims 1) searching for information (*scanning*), 2) reading for general information (*skimming*), 3) reading for a detail, W. Grabe suggests three more targets to be attained by academic reading: 4) reading to learn some information, 5) reading to integrate information from

different sources and build a general frame, 6) reading to analyse, critique and use information [122, p. 8]. Two more purposes of reading academic texts may be added: 7) to write (so the article serves as a model for completing some written task) and 8) to search for the information needed for writing.

Table 1.4 presents the correspondence between the purposes and types of academic reading.

Table 1.4

Purposes and types of academic reading

Purpose of reading	Dominant type of reading
To search for information	Scanning
To learn from texts	Reading for a detail
To integrate information	Skimming, reading for a detail
To write	Skimming, reading for a detail
To search for information needed for writing	Scanning, skimming, reading for a detail
To analyse and critique texts	Critical reading
For general comprehension	Skimming
For a detailed information	Reading for a detail

Taking into account the purposes of reading in academic settings we distinguish one more type of reading – critical reading which goes beyond basic understanding. It includes complex and critical thinking on analysing and evaluating author's meaning stated explicitly and implicitly, integrating the new ideas into the known ones, prioritizing them, evaluating the author's arguments, developing own ideas using writer's [250, p. 41].

To understand the essence of critical thinking it is useful to analyse B. Bloom's Taxonomy, which distinguishes six levels of critical thinking (figure 1.1). Bloom's Taxonomy is usually presented as a triangle to show that the lowest levels (remembering and understanding) serve as foundation for the higher ones. On the highest – creating level – students create a bigger picture by combining elements [250, p. 665–669].

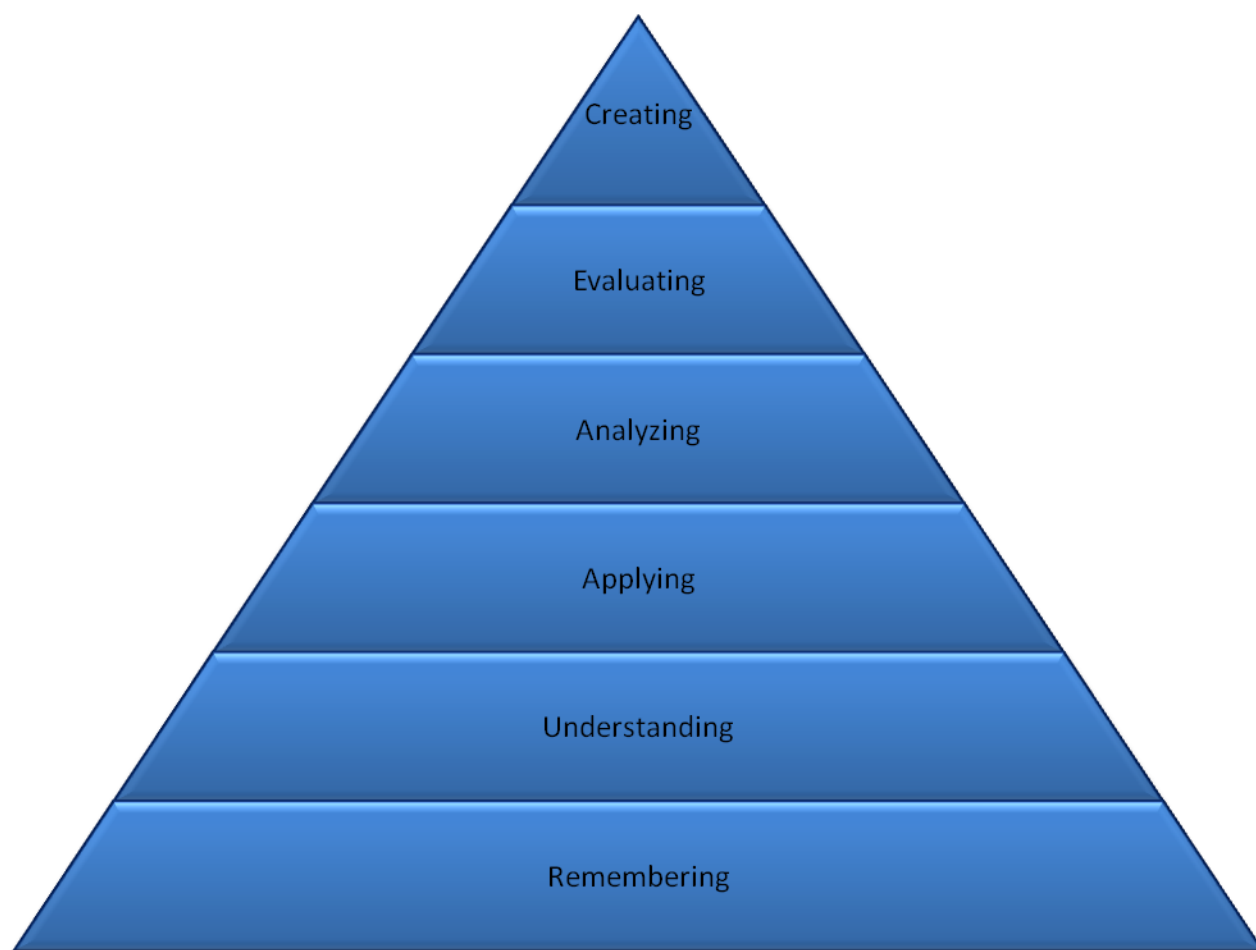


Figure 1.1. Bloom's Taxonomy

Critical reading is the ability to read, understand and think on the six levels. It is clear that to teach students think critically, it is necessary to encourage them to apply, analyse, evaluate information from the text, create summaries, generate questions etc. It is interesting that understanding is a basic level which should be further developed by applying, analyzing, evaluating information and creating own ideas taking into account the author's.

So to teach students to read critically different types of activities which include applying, analyzing, evaluating information from the text and creating some new product should be applied.

According to table 1.4 one type of reading rarely occurs in academic settings. Usually it is a combination of different types. For example, if students are reading with the aim of integrating some information, they have to skim texts to understand their

general ideas, decide whether they contain any useful information and are worth reading more thoroughly and if it is necessary to focus on some difficult parts or analyze them precisely.

As it has been mentioned, fluent academic reading requires a large vocabulary and a good command of grammar. Using modern literature on the problem [123, p. 130; 132] and analyzing the requirements of the program [26] we have come to the conclusion that students should master the following *reading skills* no matter which type of reading is employed:

- access the meanings of a large number of words automatically;
- assign meaning to words, phrases and sentences;
- infer meaning from phrase- and clause-level grammatical information;
- anticipate grammatical and semantic categories used.

On the basis of modern literature analysis [11, p. 503–506; 89; 123; 132, p. 39; 181] we have drawn up a list of *reading comprehension skills* for academic reading and classified them in accordance with the types of reading:

Scanning:

- identify the topic, contents and significance of academic texts (articles, theses, reports etc.) and decide whether the text is worth reading more in detail;
- find the necessary information in academic texts;
- select and understand evaluative judgements in academic texts;
- assess the relative importance of the information.

Skimming:

- understand the gist and main details of academic texts (articles, theses, reports etc.);
- define quickly the contents and expediency of a more detailed reading of academic texts;

- understand the gist and major details of long reviews, analytical and polemical articles which present different views; evaluate importance, novelty, certainty and persuasiveness of the information presented;

- understand the gist and major details of complicated academic texts which presuppose different treatment and be able to evaluate certainty and truthfulness of events and facts;

- infer the main idea using patterns and other clues;
- use context clues to understand meaning;
- classify ideas into major ones and details;
- anticipate the contents of the text on the basis of the title and key words;
- identify tone or emotion in a text;
- evaluate the accuracy of a text judging from what the reader already knows;
- integrate text information with existing schematic knowledge;
- assess the relative importance of the information;
- recognize and repair miscomprehension.

Reading for a detail:

- understand argument in an academic text;
- follow the development of argument in academic texts;
- classify ideas into major ones and details;
- anticipate the contents of the text on the basis of the title and key words;
- distinguish facts, ideas and opinions in complicated academic texts expressed explicitly;
- distinguish author's opinion expressed implicitly and explicitly;
- differentiate information about real facts and assumptions;

- evaluate the accuracy of a text judging from what the reader already knows;
- make conclusions about the author's choice of lexical items;
- make conclusions about the author's syntax;
- understand linking words;
- ask questions in an inner dialog with the author;
- categorize words and ideas into general and specific;
- identify the relationships between ideas;
- understand the structure of the text;
- be able to see connections between ideas;
- recognize and repair miscomprehension;
- integrate text information with existing schematic knowledge;
- identify tone or emotion in a text.

Critical reading:

- evaluate the accuracy of a text with respect to what the reader already knows;
- identify the relationships between ideas;
- understand the structure of the text;
- be able to see connections between ideas;
- evaluate the accuracy of a text with respect to what the reader already knows;
- evaluate author's argument and its strength;
- analyse and evaluate author's meaning stated explicitly and implicitly;
- integrate the new ideas into the known ones;
- prioritize writer's ideas;
- develop own ideas using writer's.

The same skills can be applied to different types of reading (e.g., *evaluate the accuracy of a text with respect to what the reader already knows*) which proves the fact that the mentioned types are interconnected.

The next step is to define which study skills future philologists should master in order to comprehend challenging academic texts. Inspired by some investigations [11, p. 63–72; 132, p. 39] as well as classroom observation and taking into consideration the fact that students should be able to select texts for extensive reading, we have drawn a list of *study skills*:

- analyze vocabulary using context clues, word structure analysis etc.;
- seek information from various sources;
- synthesize information from various sources;
- analyse information from various sources;
- select appropriate texts applying relative criteria;
- classify sources by genre category;
- analyse graphs, charts etc. effectively;
- use text-based, visual, and interactive electronic resources to collect and compile information;
- select effective reading and study strategies and techniques;
- analyse the conditions with the aim of selecting effective strategies and aids;
- analyse one's own learning style;
- reflect on the effectiveness of one's own reading process;
- select appropriate reading strategies for different types of text;
- diagnose reading errors and miscomprehension.

Another component of academic reading competence is knowledge which can be both explicit (knowledge of different facts) and implicit (knowledge how to perform some action) [2, p. 235].

On the basis of scientific literature analysis [11, p. 63–72; 132, p. 39] we have specified that to read academic texts efficiently students should *know*:

- types of reading;
- academic texts structure;
- academic style characteristics;
- linking words;
- genre characteristics;
- explicit and implicit meanings in the text;
- reading strategies;
- how to analyse the information critically;
- how to use strategies efficiently;
- general purposes;
- sources of information;
- peculiarities of one's own learning style;
- preferred strategies in accordance with one's own learning style.

To help students master new skills or improve existing ones it is effective to make them focus on one skill at a time and practice its application in different text with subsequent discussion of the process. In that case students eventually will be able to use the skill unconsciously as well as consciously and strategically while reading a challenging text [181]. Learners should be aware of the process and be encouraged to discuss how they searched for the meaning of the text [75].

It seems reasonable to analyse the relationship between skills and strategies though the distinction is sometimes vague because of the nature of reading (not due to a definitional problem) [53]. Skills are referred to “information-processing techniques that are automatic” and applied to a text unconsciously while strategies are regarded as cognitive or behavioral actions selected deliberately under particular contextual conditions to achieve definite goals mainly to improve some aspects of comprehension [125, p. 6; 199, p. 611]. Strategies are “deliberate, goal/problem-oriented, and reader-

initiated/controlled” [155, p. 205] and consist of “operations, steps, plans, routines used by ... learners to facilitate the obtaining, storage, retrieval, and use of ... information” [215, p. 19]. So the major difference between skills and strategies lies in the dichotomy “conscious/ subconscious” though, as we have mentioned above, not all skills can be employed unconsciously. In our opinion, reading skills can be automatic. As for reading comprehension skills, they are mostly conscious as refer to higher-level reading processes and demand purposeful thinking (e.g., *synthesizing information from various sources or evaluating the accuracy of a text with respect to what the reader already knows*).

P. Afflerbach and his colleagues considered reading strategies to be “skills under consideration” to denote that depending on the reader’s intention, level of control, purpose, task and the situation itself the same actions could be either a skill or a strategy [42, p. 17].

Paraphrasing N. J. Anderson’s definition [53] we can describe strategies as techniques that are potentially open to conscious reflection and selected by a reader to address a problem or achieve a specific goal while reading.

Effective reading strategies will be analysed more in depth in the following section.

Thus, we have specified the structure and the content of academic reading competence which consists of knowledge, reading skills, reading comprehension skills and study skills.

Besides the above-mentioned (intensive practice, strategy use, subject knowledge) the effectiveness of academic reading is influenced by many other factors among which is extrinsic and intrinsic motivation to gain new knowledge, develop academic reading ability, get a good mark etc.; social interaction, especially discussing the results, problems, ideas with groupmates, collaboration with other students on a project all of which enable them to make good choices, succeed in learning. It has been proved [127; 228] that intrinsic motivation and social interaction are mutually enhancing.

There are different theories which explain the origin of motivation and possible ways of influencing its development. Thus, according to:

- *achievement theory* motivation is a desire to avoid failure, demonstrate competence and show success;
- *attribution theory* students attribute their failures to different causes and motivation depends on attribution (insufficient efforts, difficult tasks, lack of ability etc.);
- *social-cognitive theory* motivation is a combination of abilities, external factors and behaviour in a particular situation, students' persistence depends greatly on how they feel about themselves and their abilities to do a task;
- *goal theory* people are driven either by mastery or performance goals; the former lead to developing competence, acquiring skills and feeling satisfied with achieving learning goals while the latter does not necessarily mean any engagement in skills development if the person does better than others and his abilities are recognized;
- *self-determination theory* intrinsic motivation depends on competence, autonomy and relatedness to some supportive groups [122, p. 176–179].

Each of the theories focuses on particular aspects and contributes to the understanding of the nature of motivation. All of them emphasize the importance of learner's goals which various theories treat in different ways but recognize them as the factor that determines motivation. In light of the above-mentioned theories we suggest that to develop reading motivation teachers should:

- create the encouraging environment;
- suggest the tasks that are just above the students' level to give them opportunity to perform successfully, demonstrate their competence and avoid failure;
- provide students with useful feedback;
- encourage students' reflection on the reasons of failure;
- develop students' self-assessment abilities;

- develop mastery goals which mean the desire to constantly develop personal skills no matter how good students are;
- develop students' autonomy by providing them with more options, encouraging to learn independently etc.;
- providing group support that develops the feeling of acceptance;
- develop initial curiosity which may turn into real personal interest;
- suggest tasks that create emotional responses;
- provide effective goal setting.

A very important factor, that proved to contribute to achievement, as well as to motivation [93; 183; 244], is autonomy which is described as learners' ability to take charge of their own learning [134, p. 3]. On the one hand, autonomy is a goal itself as only autonomous learners can be really successful, but, on the other, a tool to attain learners' targets which means delegating students "more responsibilities in decision taking and self-evaluation" [12, p. 65]. Learners become autonomous only if an appropriate classroom culture has been created to promote it. Autonomy does not mean working alone, a peer collaboration can be an effective way to develop it and attain the learner's targets. Besides, the teacher should rather facilitate students' learning than manage and control it giving them the feeling of independence and responsibility for their own learning.

One more factor is developing students' reflection which proved to have a positive influence on students' progress [70; 96; 162; 188]. There are different definitions of the term: "intellectual and affective activities that individuals engage in to explore their experience, which leads to new understanding and appreciations" [70, p. 19]; "a form of mental processing with a purpose and/or anticipated outcome that is applied to relatively complex or unstructured ideas for which there is not an obvious solution" [188, p. 23]. In terms of teaching academic reading reflection can be described as a form of mental processing on achieving general and learner's individual targets, effectiveness of one's learning, possible correctives, which includes self-control and self-assessment.

As correctly organized instruction is closely connected with all the other elements and can influence most of them, it is, in our opinion, the dominant factor of all (e.g., correct instruction can enhance students' motivation; shape learning goals and make students understand them better, provide future philologists with purposeful reading practice; encourage strategy use, social interaction and self-reflection; create autonomous and supportive environment).

Figure 1.2 illustrates the structure of academic reading competence and the factors that influence its development.

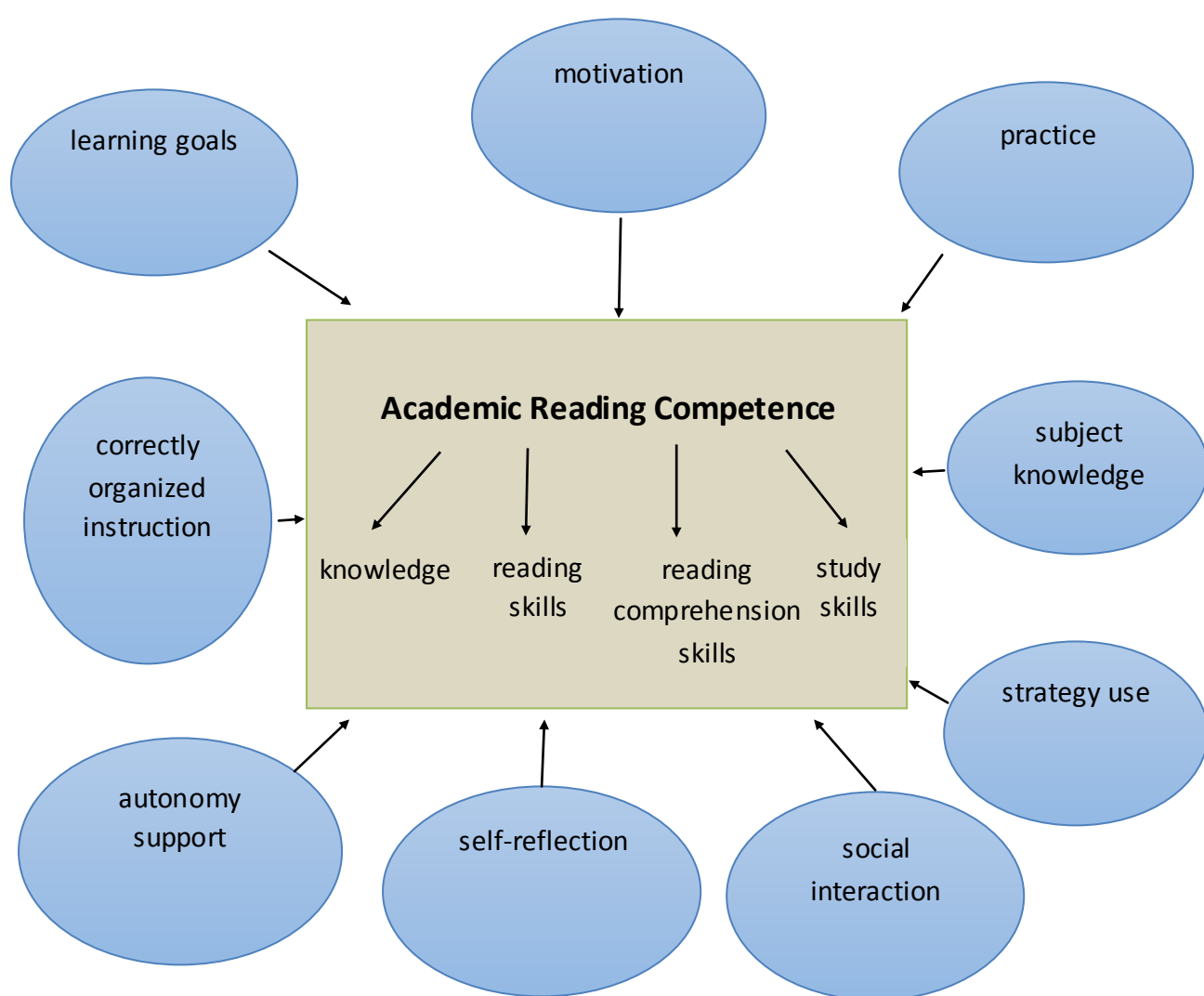


Figure 1.2. Structure of academic reading competence and factors that influence its development

Thus, the components of academic reading competence – reading skills, reading comprehension skills and study skills as well as knowledge – have been determined, analysed and specified in the section. The above-mentioned skills and knowledge cannot and should not be separated, but learned in support of each other. Academic reading competence development is influenced by the following factors: learning goals, motivation, practice, subject knowledge, strategy use, social interaction, self-reflection, autonomy support, correctly organized instruction. We consider the latter the dominant one which influences all the other factors.

1.3. Effective academic reading strategies

Strategies have been of major interest in foreign language learning for quite a long time. There are also researches which refer to foreign language reading strategies specifically though their number is surprisingly limited despite the fact that scientists recognize the relationship between reading strategy training and reading comprehension development. Surprisingly there are many more studies of first language reading strategies [90; 69; 129] than second language strategy influence and comprehension improvement.

Comprehension can be extremely effortful even for proficient readers when they read challenging texts (for example, academic texts with new terms or on unfamiliar topics). In cases of comprehension breakdown conscious and time-consuming strategies are very important as they can help repair comprehension. Besides, many readers do not know whether they adequately comprehend the text. In research on comprehension calibration [114; 168] scholars compared readers' evaluation of how well they had comprehended texts, and the results of tests on text comprehension. The correlations were alarming low (0.27), even among college students. It was concluded that such readers incorporate analysis of shallow levels (they believe that they comprehend the text if they can recognize content words and understand most of sentences) [60; 194] whereas deep comprehension requires inferences, linking ideas, evaluating arguments, integrating new knowledge with the previous. In this case effective strategies can help readers improve their

comprehension calibration and facilitate deeper levels of comprehension [125, p. 4]. In such cases readers do not pay attention to the global level of the text (coherence, consistency of the context), and understanding the text at the local level readers develop an illusion of comprehension [176, p. 469]. An effective way to monitor comprehension is to use appropriate strategies which help to determine the level of comprehension.

As there are different views on the effectiveness of strategies they have different status in different comprehension models. For example, in Construction-Integration Model (W. Kintsch [151]) they are not supposed to be of main importance for comprehension as a strategy is regarded as a piece of knowledge stored in a long-term memory that is extracted during integration of ideas activated from the input of the text [125, p. 11–13].

In Constructionist Model, however, strategies play a crucial role [125]. Strategies used depend on the reader goals, are governed by the reader attempt to construct meaning coherently at both local and global levels and generate explanations of ideas expressed in the text. So coherence and explanation strategies are necessary for good comprehension [125, p. 13–14].

There are numerous studies that prove the importance of explicit reading strategy instruction as a means to improve students' comprehension in second or foreign language learning (e.g., P. Afflerbach, D. P. Pearson, S. G. Paris [41]; H. Chodkiewicz [86]; W. Grabe [122]; K. Koda [155]; L. McNeil L. [177]). It has been found that comprehension strategies can be taught and learned (e.g., A. McGee, H. Johnson [174]; M. Pressley and others [205]).

E. Macaro and L. Erler conducted a 14-month research of strategy instruction of 11–12-year-olds in England who were learning to read French texts. After the training translation test and a text idea-recall results showed that the experimental group significantly outperformed the control group [166]. The meta-analysis, carried out by A. Taylor, J. Stevens, J. W. Asher [232] to explore the importance of instructional context, showed that explicit reading strategy instruction makes a difference and improves students' reading abilities.

The question of developing the strategic reader is of utmost importance for academic reading as linguistic and content characteristics of academic texts make at least some of them extremely challenging to the reader and demand efficient use of strategies relevant to the type of the text, reader's learning style and the purpose of reading.

Reviewing the research on foreign language academic reading, Fitzgerald J. [105] came to the conclusion that a proficient foreign language reader utilizes the strategies (the amount and choice) which a proficient first language reader uses. Moreover, there is a correspondence between the proficiency of a reader in a foreign language and the types of strategies he or she uses (they resemble those of a proficient first language reader). Similar findings and views were presented and analysed in other studies [104; 143]. The Report of the National Literacy Panel on language-minority children and youth (2006) supported the importance of a relevant language proficiency for effective strategic reading and stated that "strategies of various types are unlikely to help students who do not have the requisite language proficiency to comprehend the text" [95, p. 355]. The above-mentioned resources prove the threshold theory according to which students cannot "benefit from certain levels of instruction until their second language proficiency is at a sufficient level" [161, p. 173]. The theory has also been supported by a number of recent studies which demonstrated the greater role of foreign language proficiency (in comparison with first language proficiency) [67; 122; 202; 248]. It is supposed that readers cross the threshold when they know almost all of the words in the texts and can process them fluently. So there is not any defined level of proficiency that can be adopted as threshold as it depends on the reader, the text, the topic and the task [123, p. 43].

Reflecting on the theory we can make the conclusion that academic reading due to its challenges demands quite a high level of language proficiency. However, the insufficient proficiency can be compensated by the use of efficient strategies. Though there is the view that in case of proficient reading the importance of background knowledge decreases [177], the analysis of scientific literature, presented in the previous section, and our own teaching experience prove the significance of background knowledge in academic reading as it helps the reader to understand the information and infer the meaning.

The research of professional students reading strategies, conducted by A. Allan [52], G. Taillefer and T. Pugh [231], demonstrated the importance of the first language strategies which can be effectively transferred into the second language reading and compensate for insufficient second language proficiency. The idea of strategies transfer was also supported by K. Koda [155].

K. Mokhtari and S. Reichard [186] found that similar metacognitive comprehension strategies are used more effectively in the first and second language reading at higher levels of proficiency and that reading in the second language is getting more and more similar to the one in the first as the proficiency develops. The idea was supported by W. Grabe W. And F. L. Stoller who claimed that at “very advanced levels first and second language reading abilities tend to merge and appear to be quite similar” [123, p. 4].

K. Yigiter, A. Saricoban and T. Gürses [249] made the conclusion that strategies used by efficient readers depend on the reading purpose.

We can also suggest that learners with sufficient level of reading proficiency who fail to comprehend correctly may incorporate inefficient strategies or use them irrelevantly.

All in all, the more efficiently readers use strategies in the first language reading, the more effectively they will employ them in second language comprehension. High level of language proficiency, flexible usage of relevant strategies depending on the purpose of reading and their transfer from the first language are crucial for effective academic reading. We can suppose that the fourth-year students of Linguistic faculties are proficient first language readers and have already mastered relevant first language strategies. So to read academic texts effectively they should be taught to activate relevant first language strategies and transfer them into the second language academic reading.

As it has been mentioned before, teaching academic reading should be an individualized process. It is evident that strategy instruction must be focused on an individual reader, which may include student’s strategy knowledge and use assessment, personalized instruction that accommodates reader’s needs and previous

reading experience [132, p. 70]. We have developed the suggestions of W. Grabe and F. L. Stoller [122, p. 84–85] as well as Hedgcock J. S. Ferris D. R. [132, p. 71] on providing strategy instruction:

- encourage students' analysis of strategies used in the first and second language reading (lists of strategies used can be produced – one for the first language reading and the other– for the second with subsequent analysis);
- integrate strategy use and discussions about strategy use into classes;
- develop student awareness of strategies;
- introduce effective strategies;
- encourage students to use strategies;
- encourage class discussion and sharing experience on using strategies depending on the type of reading;
- provide access to academic texts;
- create tasks that require strategic reading;
- encourage each student to create a strategy development plan at the beginning of the course, track and analyse their usage of strategies;
- motivate students' reflection on useful strategies in intensive and extensive reading;
- track each student's progress in accomodating specific strategies.

The next step in our investigation is to specify strategies necessary for efficient academic reading. For this purpose we have to analyse and adopt classification of strategies which is the most appropriate to the topic of the investigation.

During the last decades different strategy taxonomies have been developed [54; 82; 87; 110; 155; 211]. For example, A. U. Chamot and J. M. O'Malley suggested three strategic categories: cognitive strategies which help readers to fulfill cognitive reading tasks (e.g., inferencing, word analysis); metacognitive strategies which regulate and control reading process, help to monitor comprehension or repair misunderstanding; social and affective strategies that assist in learners' interaction and cooperation with others and support oneself in one's reading process [79; 82].

However, we will focus on R. Oxford's taxonomy [195; 196] which seems to be the most well-grounded and appropriate to the topic of the investigation.

The scientist distinguishes direct and indirect strategies. Direct strategies include: memory strategies (creating mental linkages, applying images and sounds, reviewing well, employing action); cognitive strategies (practicing, receiving and sending messages, analysing and reasoning, creating structure for input and output); compensation strategies (guessing, overcoming limitations in speaking and writing). Indirect strategies comprise: metacognitive strategies (centering learning, arranging and planning, evaluating results); affective strategies (lowering anxiety, encouraging yourself, taking emotional temperature); social strategies (asking questions, cooperating with others, empathising with others) [196, p. 18–19].

We will also distinguish direct (memory, cognitive and compensation) and indirect (metacognitive, social and affective) academic reading strategies.

M. Pressley and P. Afflerbach [208] studied the reading behaviors of proficient readers and made the conclusion that they use specific metacognitive strategies before, during and after reading to better comprehend the text. Metacognition includes two critical features: self-regulation and the use of strategies [220]. Therefore, successful comprehension depends on the ability to select the most suitable strategy [103; 170; 237] in other words to self-regulate (or monitor) the success of strategies used and the reading process [176, p. 469].

Metacognition involves planning, organizing, prioritizing, self-control, monitoring, understanding, reflection on one's own cognitive processes, activities, solving problems and self-evaluation of the results of study and task fulfillment [65], its role lies in regulating cognitive processes, overseeing the use of cognitive strategies. For example, metacognition is used to monitor comprehension of the text. If the reader comes across the unknown word and it influences comprehension, the learner tries a strategy to guess what the word means (for example, context clues) and if the text now makes sense, continuous reading. Metacognitive strategies for reading are usually categorized into planning strategies, monitoring strategies, and evaluation strategies [154, p. 221].

To study students' perception of reading strategies in academic settings K. Mokhtari and C. A. Reichard [185] and K. Mokharti and R. Sheorey [187] conducted a survey for the first language users (MARSI – Metacognitive Awareness

of Reading Strategies Inventory) and foreign language learners (SORS – *Survey of Reading Strategies*). The following strategies were found to be the most effective for academic reading: taking notes, paraphrasing text information, revisiting previously read information, asking self-questions, underlining text information, discussing texts with others, writing summaries of texts [185].

Another study of academic reading strategies suggests four types of strategies with monitoring comprehension as a main component: 1) before-reading strategies – setting and recognizing reading goals; 2) interpreting strategies – close reading, bridging inferences, marking, annotating; 3) going beyond the text strategies – activating prior knowledge; 4) synthesizing strategies – using selected information from the text [176, p. 467]. A. M. Ediger distinguishes five metacognitive strategies which should be used if students read with the purpose of learning: reflecting on what has been learned from the text, underlining the information from the text, thinking how to use the text in the future, making notes, paraphrasing some fragments to remember them [101].

Considering R. Oxford's classification to be an appropriate one for specifying academic reading strategies and taking into consideration the results of scientific literature analysis [12; 101; 154; 176; 185], we have specified strategies which are to be incorporated in academic reading:

- *memory strategies*: creating mental linkages, applying images, using concept maps, reviewing well, employing action;
- *cognitive reading strategies*: activating linguosociocultural and linguistic knowledge, anticipation of structure and contents, identification of the received linguistic and extralinguistic information, searching for keys, hypothesizing upon intention, analysis, summarising, visualising, defining key words, previous knowledge analysis, considering relationships between visual and non-visual parts of the text; translation, defining difficulties, focusing on main aspects, analysis of the author's approach, text interpretation, contents anticipation, defining major information, selective reading, comparing gained knowledge with previous, using speech patterns, outlining (listing the text's main ideas to reveal how it is organized), paraphrasing (restating what you have read to clarify or refer to it), synthesizing (integrating into your

own writing ideas and information taken from different sources), contextualizing (placing a text in its historical and cultural context), reflecting on challenges to your beliefs and values (examining the reasons of your personal responses to a text);

- *compensation strategies*: guessing using different clues (context, morphological analysis of words), ignoring unknown words, parts; multiple reading;
- *metacognitive strategies* (clarifying purposes of reading; using dictionaries; centering learning; arranging and planning; annotating (recording your reactions to, interpretations of, and questions about a text); taking inventory (listing and grouping annotations and other notes to find meaningful patterns); self-control; self-evaluation; preliminary listening or reading with the aim of getting information; slow reading; fast reading; reading aloud; revisiting previously read information; using tables, schemes, semantic maps, nonlinguistic representation (mental pictures, drawing pictures, kinesthetic activities); asking questions, looking for answers; underlining text information; discussing texts with others; writing summaries of texts; paraphrasing (restating what you have read to clarify or refer to it); monitoring comprehension and fixing-up; taking notes);
- *social and affective strategies* (rewarding oneself for positive results, asking for help or explanation, discussing information with others, self motivation, selecting materials according to own interests, peer learning, selecting strategies according to own learning style, using music, communication with proficient language users and native speakers, lowering anxiety, encouraging oneself, taking emotional temperature, cooperating with others, empathising with others).

To evaluate students' strategic awareness and find out which strategies they use and find most helpful we asked 59 fourth-year philology students from Taras Shevchenko National University of Kyiv (September 2014–2015) to answer the questions designed by the author and partly based on the questionnaire developed by H. Chodkiewicz [86]. Students were asked to rate the strategies in terms of their helpfulness by choosing one of five options: 1 – very unhelpful, 2 – not helpful, 3 – neither helpful nor unhelpful, 4 – helpful, 5 – very helpful. Students' evaluation was based on the reflection of their own experience and individual practices. That is why rating the strategies by their helpfulness students also demonstrated which of them they use most often.

The students' answers are summarized in table 1.5.

Table 1.5

The students' perceptions of helpfulness of academic reading strategies

№	Reading strategies	Helpfulness				
		1	2	3	4	5
1	I try to activate linguosociocultural and linguistic knowledge before reading	4	15	21	18	2
2	I search for keys	3	11	10	28	7
3	I try to visualise	4	19	21	16	
4	I define key words	4	11	23	10	1
5	I analyse previous knowledge and try to connect the text with my subject knowledge	2	6	11	28	12
6	I ask questions on the text and answer them	1	4	8	31	15
7	I list the main ideas of the text to reveal how it is organized	1	4	6	19	29
8	I paraphrase (restate what I have read to clarify or refer to it)	5	9	12	29	4
9	I synthesize (integrate into my own writing ideas and information taken from different sources)		3	5	32	19
10	I guess using different clues (context, paralinguistic means), ignoring unknown words, parts				36	23
11	I check some words/phrases I don't know in a dictionary				44	15
12	I always clarify purposes of reading	4	13	19	21	2
13	Reading a text I usually annotate (record my reactions to, interpretations of, and questions about a text)	3	8	18	20	10
14	I adjust the type of reading to the purpose taking into account the features of the text				16	43
15	I use slow reading; fast reading; reading aloud, revisit previously read information				40	19
16	I use tables, schemes, semantic maps	3	5	9	27	15
17	I reread those parts of the text which I find difficult to understand.				8	51
18	Having finished reading I look at the text to check its main ideas again.				49	10
19	I study all the diagrams, tables and other graphic resources carefully.		6	16	30	7

Judging from the answers, students seem to be well aware of helpfulness of some strategies and use them regularly. They find helpful compensation strategies and use dictionaries if needed, are ready to adjust type of reading to the purpose and the type of text, recognize the importance of rereading difficult fragments. However, they seem to underestimate some useful cognitive (e.g., activating linguosociocultural and linguistic knowledge before reading, defining key words etc.) and metacognitive (e.g., clarifying purposes of reading, annotating etc.) strategies. Besides, students undervalue the importance of diagrams, tables and other graphic resources which usually illustrate, visualize, prove the ideas presented by the writers and thus help to understand the writer's opinion.

Even though the students' answers showed some level of strategic awareness, they should still practice and be assisted in their strategy-oriented reading.

In other words, future philologists should be taught and encouraged to use strategies to attain reading goals and monitor comprehension. The latter is extremely important for the results of academic reading. Inspired by D. S. McNamara [176] we have made the conclusion that comprehension should be monitored on different levels, and for this readers may be recommended to use: 1) before reading strategies (activating background knowledge, anticipating the structure and the content etc.), 2) strategies to understand words, sentences (e.g., using context clue, word structure analysis); 3) strategies to interpret ideas (e.g., analyzing, generating questions etc.) and 4) strategies to restructure and synthesize the text (e.g., taking notes, synthesizing etc.) (see figure 1.3).

Readers must constantly monitor comprehension at various levels and when it fails, they must recognize the failure and make a decision whether to take immediate actions (e.g., rereading, jumping ahead in the text) or not (waiting for further clarification by the author and keeping the confusion in mind). If the reader comes across unfamiliar words, actions must be taken to understand the meaning (using different clues, consulting a dictionary etc.).

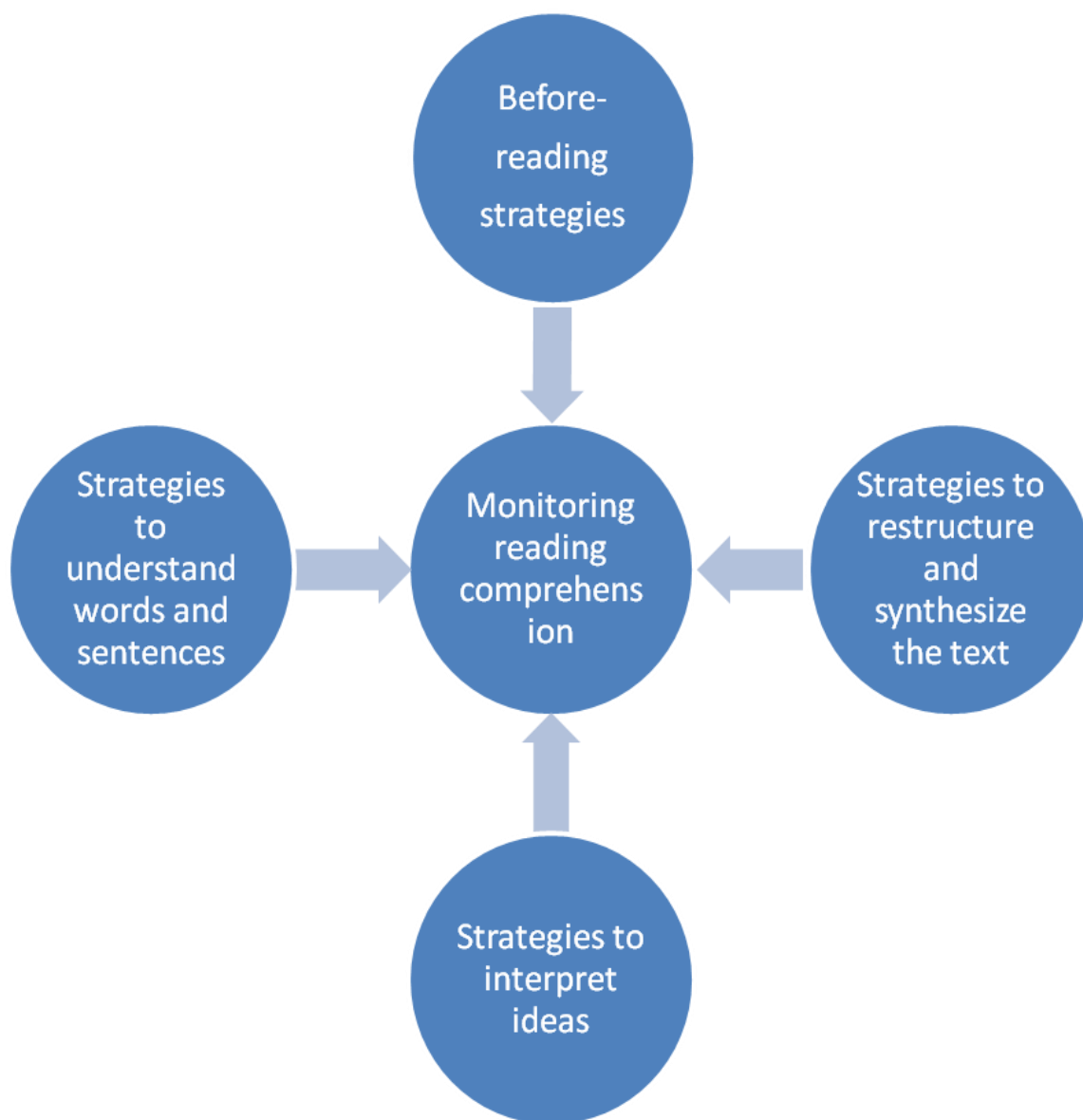


Figure 1.3. Strategies to monitor comprehension

An efficient way to monitor comprehension is to take notes while reading which provides a kind of a summary of the text [176, p. 472] or generate questions (while reading, after reading and after a delay) on the content of the text and answer them [147].

One of the most efficient and typical of academic reading strategies is note-taking, the advantages of which in foreign language learning were first emphasized by language learning strategy specialists. It is an activity which consists in reformulating and shortening the information by using words or concepts in their abbreviated form [193, p. 138]. It is used with the aim of storing information and learning both the content and the language by writing (or printing in case of using a computer). The

information is remembered by creating external memories which can be used in future [204]. It has been confirmed [109] that the learning is more effective if the notes are taken by the learner.

To fix-up comprehension students can mark the places in the text where they became confused and a) discuss them with peers or teachers, b) reread to better understand the meaning, c) read ahead paying attention to the confused point until their confusion is cleared. Students should analyse how they regained comprehension and it will help them better understand the strategies used and promote further automatic fixing up.

As it has been mentioned before, much depends on students' background knowledge. To activate different connections (to reader's own experience, to the world and other texts) we have adapted J. Moreillon's [189, p. 23–24] approach. The following questions focus on connecting the text to reader's feelings, experiences, and ideas:

- Have you heard or read this information before?
- What does this information mean to you?
- How does connecting the information to your own experience help you better understand it?

- How does the information make you feel?

The following questions help to create a connection to other texts:

- Have you ever read another article on the topic similar to the given?

Describe how they are the same. What are their differences?

- Do you agree with the idea of the article?
- Is the information in the article familiar to you?
- What is the new information? Does it correlate with the one you already know?

- How does making connections to familiar texts help you comprehend the new text?

Text-to-world connections can be established with the help of the following questions:

- What do you think the author's message or purpose was in presenting this information?
- Did the author suggest a message that connects with bigger ideas? What do you already know about these issues?
- What do you think was the author's opinion or perspective on the big ideas in this text? Do you agree? Why or why not?
- How does making connections to larger issues help you comprehend this text?

Regardless of which strategy students are being instructed, the following suggestions should be taken into consideration adapted from some expert sources [154, p. 221–222; 171; 229]:

1. Begin with an easier reading material. The main aim is to to teach students how to use the strategy, so the text is only a tool to reach the aim.
2. Explain the strategy clearly and thoroughly, step-by-step.
3. Activate background knowledge.
4. Focus on the potential benefits of using the strategy, give vivid examples.
5. Model the strategy for the students, repeating the steps you explained and using a think-aloud procedure.
6. Provide students with opportunities to practice the strategy in the group (in small groups, in pairs). Monitor the process and explain challenging or missed steps.
7. Provide opportunities to practice the strategy independently.
8. Encourage feedback.
9. Increase the difficulty level of the text and remind students to use the strategy.
10. Provide students with some brief written information about the strategy.
11. Encourage student self-evaluation on how the strategy works.

We have analysed and specified the strategies that should be used in academic reading: direct (memory, cognitive and compensation) and indirect (metacognitive, social and affective) strategies. Much attention in academic reading should be used to acquiring strategies that monitor comprehension on different levels (before reading strategies, strategies to understand words, sentences, strategies to interpret ideas, strategies to restructure and synthesize the text). The above-mentioned strategies will be focused on in the system of exercises.

Conclusions to chapter 1.

Modern scientific literature analysis on the topic and the study of reading models (metaphorical– bottom-up, top-down, interactive models and specific – Interactive Compensatory Model, Word Recognition Model, Simple View of Reading Model, Dual-Coding Model, Psycholinguistic Guessing Game Model) enabled the conclusion that teaching future philologists English academic reading should be based on the following ideas: developing grammatical and especially lexical skills which are essential for reading comprehension; academic texts analysis with the aim of further focusing on their main features and predicting possible difficulties which students can face; activating students' prior knowledge; developing linguistic and background knowledge; careful text selection with the focus on students' linguistic and subject knowledge; focus on visual information and means of its visualization (both during and after reading to better comprehend the information); practicing intensive and extensive reading of academic texts; applying integrative approach to teaching reading; teaching strategies through direct instruction, encouraging learners to select appropriate strategies according to the type of the text and reading goals, individualize their strategy repertoires; problem-based learning with the aim of developing creativity, reflection, personal qualities; individual approach to learners. Developing the methodology of teaching reading English academic texts to philology students we will take into account the above-mentioned ideas.

Academic reading competence is the ability to read authentic academic texts of different types demonstrating different levels of understanding depending on the objectives.

Reading consists of lower-level processes (automatic word recognition, rapid and automatic syntactic processing, combining word and structural meanings into units) as well as higher-level processes (coordination of main and supporting ideas of the text, interpretation of the information from the text). Skills which are typical of lower-level processes can be relatively automatic while skills of upper-level processes are not automatic. Reading comprehension processes of fluent readers work simultaneously and the purpose defines reading processes emphasized. Working memory plays an exceptional role on both levels as its major component – executive control – is recognized as central to comprehension processing.

On the basis of scientific literature analysis we have made the conclusion that academic reading competence consists of knowledge, reading skills referring to the lower-level processes (lexical, grammatical), reading comprehension skills relating to higher-level processes and study skills, all of which have been specified in the chapter.

Academic reading includes different types of reading: scanning (hurrying over most of the text until the necessary information is found), skimming (reading quickly through the text to get its general idea), reading for a detail (to fully understand the text) and critical reading which includes complex thinking on analysing and evaluating author's meaning stated explicitly and implicitly, integrating the new ideas into the known ones, prioritizing them, evaluating the author's arguments, developing own ideas using the writer's thoughts.

The effectiveness of academic reading is influenced by the following factors: learning goals, motivation, practice, subject knowledge, strategy use, social interaction, self-reflection, autonomy support, correctly organized instruction. We consider the latter to be the dominant one which influences all the other factors.

The analysis of existing theories which explain the origin of motivation and possible ways of influencing its development (achievement theory, attribution theory, social-cognitive theory, goal theory, self-determination theory) enabled the conclusion

that to enhance motivation it is necessary to create the encouraging environment, suggest the tasks that are just above the students' level to give them opportunity to perform successfully, provide students with useful feedback, encourage students' reflection on the reasons of failure, develop students' self-assessment abilities, develop mastery goals which mean the desire to constantly develop personal skills no matter how good students are, develop students' autonomy by providing them with more options, encouraging to learn independently etc., provide group support that develops the feeling of acceptance, develop initial curiosity which may turn into real personal interest, suggest tasks that create emotional responses, provide effective goal setting.

On the basis of modern literature study and the analysis of the results of the survey conducted among the fourth year philology students the conclusion has been made about the necessity of explicit reading strategy instruction and the significance of the first language strategies which can be effectively transferred into the second language reading and compensate for insufficient second language proficiency. It has been proved that much attention should be paid to teaching students to monitor comprehension on different levels with the help of: before reading strategies (activating background knowledge, anticipating the structure and the content etc.), strategies to understand words, sentences (e.g., using context clue, word structure analysis), strategies to interpret ideas (e.g., analyzing, generating questions etc.) and strategies to restructure and synthesize the text (e.g., taking notes, synthesizing etc.)

Direct (memory, cognitive and compensation) and indirect (metacognitive, social and affective) strategies, which are to be incorporated in academic reading, have been specified in the chapter.

The basic concepts of the chapter are presented in the publications [46; 48; 50; 51].

CHAPTER 2

METHODOLOGY OF TEACHING READING ENGLISH ACADEMIC TEXTS TO PHILOLOGY STUDENTS

2.1. Basic characteristics and criteria for academic texts selection

To work out the methodology of teaching academic reading English philology students, it is necessary to analyse the main characteristics of academic texts, which students will encounter, and ground criteria for text selection.

Since more than 90 per cent of the journal literature is edited in English [142, p. 24], it has been recognized as an academic lingua franca. Anglo-American academic writing style, which can be considered the standard for academic communication [68, p. 6], has its own peculiarities which need to be analysed and understood for better academic texts comprehension. Students should realise the obstacles of academic text reading and be preliminary trained to overcome them or prevent the possible difficulties and comprehension problems.

There are different definitions of text developed by linguists, educators etc. Scientists describe text as a “a verbal record of a communicative act”, “the physical manifestations of language” [241, p. 6], which include orthographic symbols (letters of the alphabet or characters) as well as nonverbal elements (capitalization, punctuation, paragraphing, and format) [Hedgcock J. S. Teaching, p. 79], a sample of written language that conveys a meaning [Grabe W. Theory] and thus is not a collection of random words or sentences [132, p. 79]; any communicative occurrence which meets standards of textuality [64] among which the following have been defined: grammatical (reference, substitution, ellipsis and conjunction) and lexical (repetition, synonymy, collocation etc.) cohesion, coherence (the relation between concepts), intentionality (writer’s purposes, attitudes), acceptability (reader’s attitude to the text and its information), informativity of the ideas (known/unknown, accepted/unaccepted, grounded etc.), relevance to a situation, intertextuality (correspondence to the ideas from the texts read before) [64].

W. Kintsch and van Dijk [149; 150; 152] distinguish microstructure and macrostructure of the text. The microstructure includes a variety of individual text-based statements, whereas the macrostructure summarises them into general idea of the text. Different ideas are interconnected in a text through cause-and-effect, problem/solution, description, comparison etc. [178; 179; 180]. Comprehension comprises understanding pieces of text as well as its general meaning and ideas; however, it is much easier for the reader to grasp the overall themes (macrostructure) than separate though interconnected statements, ideas and multiple types of information encoded in texts – words, morphosyntactic information, cohesive ties (microstructure) [132, p. 79–80]. So the reader has to understand the overall meaning as well as all the pieces of the text which in case of academic texts may be quite challenging. Moreover, in our opinion a complete overall comprehension is possible only if all the pieces are well understood.

Academic style is realized in academic settings through books, scientific articles, papers in conference proceedings, textbooks, handbooks, and the like. It is interwoven with elements from other styles including the administrative style (found in such genres as project reports, reports for teaching positions, master and PhD theses); the argumentative style (critiques and reviews); the advertising style (book promotions and university advertisements); the media style (public lectures, columns) [233, p. 181–182].

On the other hand, *academic style* varies in terms of the degree of formality where scholars distinguish strictly scientific, textbook-scientific (or pedagogical functional sub-style) and popular-scientific [233, p. 181].

Taking into account structural, functional features of the text types and their length of all the written genres of academic discourse we will focus attention on the research article for the following reasons:

- 1) according to the curriculum the fourth-year students study a number of linguistic subjects and have sufficient background knowledge to understand at least some articles;

- 2) the fourth-year students have an appropriate level of language proficiency to read research articles;
- 3) the length of the articles gives an opportunity to read more;
- 4) articles describe latest scientific advances;
- 5) research article is the key genre of academic world and can be regarded as an example of scientific information presentation;
- 6) the fourth-year students are supposed to read scientific texts [26, p. 156].

The main features of the *academic style* can be well applied to an article.

Though demonstrating some background knowledge and level of language proficiency, students are not ready to read all the articles as they can be quite challenging. Thus a careful text selection should be done according to scientifically grounded criteria which we will analyse below.

To better comprehend an article students should be aware of the peculiarities of the genre and be able to schematise the structure of the texts. Besides, properly organized and prepared pre-reading activities can substantially alleviate the process of reading and contribute to student better comprehension.

Genre is described as a “schematic world with its predictable contours” [113, p. 7], a “category assigned on the basis of external criteria such as intended audience, purpose, and activity type, that is, it refers to a conventional, culturally recognised grouping of texts based on properties other than lexical or grammatical (co-occurrence) features, which are, instead, the internal (linguistic) criteria forming the basis of text type categories” [160, p. 38]. They are used within professional communities.

Our analysis is based on 47 articles from recognised scientific journals such as *Journal of English Linguistics*, *International Journal of English Studies*, *ELT Journal*. The analysis has proved the above-mentioned definition of the genre as the article is schematically structured and is predictably framed.

Even though there are a lot of typical features of articles within one field, individual articles still differ as authors have different style, views etc. That is why in

the section we will focus on the main features of research articles in the field of Linguistics and Foreign language teaching remembering that each article still has its own peculiarities.

Articles present objective and precise information impersonally, with the language “leaving no room for vagueness or ambiguity”. Terminology, logical sentences, precise non-language elements (tables, statistical indicators etc.) are widely used in academic texts. As impersonality, objectivity and neutrality dominate, passive and impersonal constructions are in abundance in such texts [233, p. 182]:

e.g. *It has been shown that although numerical information often serves as a starting-point in corpus studies, qualitative analysis is a necessary complement* [266, p. 312].

When viewed through the variationist lens then, the window of variation for comparative alternation is small in ONZE [253, p. 227].

Impersonal passive constructions are often used with the verbs *to suppose, consider, assume, presume, conclude, believe, infer, point out, establish, argue* etc. (*It should be pointed out, It can be inferred, etc.*) [9, p. 292]:

e.g. *It is now well established that newborn infants are exquisitely sensitive to speech sounds, being able to discriminate all manner of contrasts which are utilized in the various languages of the world* [270, p. 21].

However, it can be argued that the examination of what has remained constant over time is also a valid and helpful component of the diachronic element of a study [256, p. 11].

The style is usually supposed to be devoid of emotional and expressive elements, though not everybody agrees with it. Such elements may be sometimes used by the authors demonstrating their attitudes if they want to draw attention of the scientific community to some thoughts or make them be accepted [233, p. 183]:

e.g. *Great orators and stylists that they were, they always found the right tone and words **to heal the wounds** inflicted by the game of power politics* [264, p. 3].

Churchill, *the masterful stylist*, was *perfectly* able to match Roosevelt's steady use of proverbial phrases that give his messages a certain conversational tone [264, p. 10].

Academic discourse is prone to intertextuality and referentiality as it features the use of quotes, literature lists, footnotes and other texts referring to the issue under discussion [233, p. 183]. Intertextuality makes us understand texts not as self-contained systems, but the ones with traces of others since they are shaped by the repetition and transformation of other textual structures [44, p. 268]. Intertextuality explains the fact that every article is retrospectively and prospectively connected with other researches and can be regarded as a microtext in some macrotext [32]. It is used to formulate hypotheses, ground the author's ideas, object to some statements etc. Intertextuality demonstrates the author's expertise, his/her understanding of the problem etc.

Intertextual elements, that are widely used in articles, perform the following functions:

- referential which is realized through references to other investigations, sources etc. to inform the reader about other researches closely connected with the article;
- evaluative which shows the authors attitude (positive or negative) to the information presented in another text;
- etiquette that demonstrates the respect to scientific community and particular scientific school;
- decorative which lies in embellishment of the text with quotes or references aimed at softening the style and strengthening the author's ideas [23, p. 18].

The analysis of the articles showed that their structure is carefully and logically organised. English articles are usually divided into parts which makes it much easier to follow the content. The transition between the parts is easy to discern as they are explicitly indicated through headings and sub-headings among which we may come across Introduction, Conclusions etc. The parts, which depend on the content of the article, may be further divided into smaller units with their own headings.

No matter how it is called, the article starts with introduction which sets the scene, claims the topic importance and proves the insufficiency of previous research. The authors usually use the word combinations like “*interest in this variation is widespread*”, “*There is an increasing interest in*” etc.

The author often indicates a gap in the previous research with the help of negative determiners *very little* and *no*. Discourse markers such as *although* or *while* are placed in the initial position of the sentences showing contrast between the need and the existing research [99, p. 24]. The adverb *however* is often used to highlight the gap:

e.g. *What remains largely unexplored in the panorama of research on adjective comparison, **however**, is casual, unmonitored speech* [253, p. 219].

*In spite of the long history of LTAs, **however**, they have rarely been the subject of academic study or research* [267, p. 127].

The use of the Present Perfect implies that the lack of knowledge about the problem started in the past and has continued to the present moment [99, p. 24]:

*It is thus notable that this variable **has featured** little in variationist research.* [253, p. 219].

Most linguistic research on issues of asylum and immigration has taken a critical discourse analysis stance, which traditionally carries out a close analysis of a small sample of texts, focusing on aspects such as positive self-presentation and negative other-presentation and argumentative and linguistic strategies ... [256, p. 6].

The argumentative effect is obtained with the help of long, compound and complex sentences:

e.g. *As a complex phenomenon predicated on functional equivalency, adjective comparison seems an ideal candidate for variationist analysis as well, as it may reflect on mechanisms, pathways, and outcomes of change.* [253, p. 219].

Sentences are typically made up of interlocking bundles as everything we know about a word is a result of our routine encounters with it, so that when we formulate what we want to say, the wordings we choose are shaped by the way we regularly find them in similar texts [258, p. 120].

Non-finite forms are also used in abundance to express subordination and state addressing important issues:

e.g. **Following** earlier work on collocation and gender, the aim of this paper is **to explore** what verbs collocate with the lemmas *girl* and *boy* as subject and object and what words modify them in a worldwide corpus of English [266, p. 292].

The variation **evinced** by historical synthetic comparison (1a, c) and “innovative” analytic comparison (1b, c) is well established, **reflecting** a long-standing change with modern-day reflexes [253, p. 219].

In the next part the author usually analyses and summarises the existing research. To emphasize what has been done in the field and the connection of the given research to the previous knowledge the Present Perfect is often used. The author describes the research and states the purpose of the article by means of the expressions “*the aim of this paper is to...*”, “*the purpose is to...*”, “*the article sets out to ...*”. Usually the verbs *to explore, argue, study, examine, reveal, test, present, situate* are used to define the purpose of the article.

The next step is problem analysis which includes scientific literature study. In this part, which is often subdivided into smaller units, the Present Perfect is often used to present what has been done. In this part the author analyses the existing studies, explains them, expresses his/her view on the problem, draws reader’s attention to some points by using “*in other words*”, “*it is important to note*”, “*related to this*”, “*What we mean by this is that ...*”, “*it is thus notable*”, “*we see in the examples above*”, “*a similar argument can be made concerning*”, “*What emerges from this brief review of research*”, “*This would imply that ...*”, “*studies have also demonstrated ...*”.

The degree of the author's confidence is expressed through adverbs *obviously, in particular, surely, indeed* etc.

The next step is usually describing the methodology (the author’s approach to the analysis, models, steps and procedures), the tools or programmes used in the research and the results obtained. Authors present the theory and authority they rely

on, a detailed explanation of the research conducted, the sources and the tools used. The data provided are organized in charts, tables, diagrams, figures etc. Tables, for example, help to organize data clearly whereas graphs and charts visualize the important points thus helping the reader to focus on significant aspects.

Our analysis proves M. Dževerdanović-Pejović's claim [99, p. 28] that the lexemes from the semantic field of the research experiment are usually utilised, including the nouns *sample, analysis, results, ratings, material, method, finding* and *data*, and the verbs *measure, compare, conduct, examine, construct, observe* and *identify*.

Almost every article analysed contained conclusions and / or discussion where Active constructions dominate (though passive are also possible) with the usage of "*I/we believe ...*", "*the results show that ...*", "*I specifically urge ...*", "*I am also concerned with ...*", "*it allows us to think that ...*", "*It is argued here ...*" etc. to summarise the results of the research. Extension of findings is introduced by means of the adverbs *finally, thus, in this respect, therefore, furthermore, moreover*. Some articles contain suggestions for further research:

e.g. *Although we have been able to explain some of the differences between the use of tag questions in British and American English ..., other questions remain, such as why Americans use a higher proportion of negative-positive tag questions than British speakers, and why there is a higher proportion of you subjects but a lower proportion of there subjects in American English tags than in British English tags* [271, p. 307].

Given the limited window of variation and the size restrictions imposed by sociolinguistic corpora, however, more studies of vernacular speech that target adjectives known to vary in written English could help shed further light on this issue [253, p. 127].

Future studies based on language corpora might also take into account the age and gender of the transmitter of messages to establish whether different groups of people convey gender values and ideologies differently [266, p. 313].

We have analysed the structure of the article and now will study the language of the article.

In M. Dževerdanović-Pejović's investigation the Textanz programme (Cro Code 2010) was used to examine the basic features of the 20 articles published by recognised linguistic scientific journals such as *The Australian Journal of Linguistics*, *English Language and Linguistics*, the *Journal of English Linguistics* and *Language and Communication*. It was found that the average number of words in the sentences was 21.17. As the average coefficient of readability is 15, the analysed texts turned out to be not among the most readable ones due to the use of long sentences "loaded with content words, attitudinal adverbs, premodifiers and frequent nominalisation" [99, p. 22]. The above mentioned results prove the fact that one of the difficulties lies in the length of the composite sentences which can be difficult to understand. As a conclusion, much attention should be paid at the pre-reading stage to sentence analysis to prevent misunderstanding and possible difficulties.

As it has already been mentioned above, impersonality is a characteristic feature of the article. However, the authors sometimes use pronouns *I* or *we* presenting the ideas which have been interpreted in one of the studies as the desire to "both strongly identify oneself with a particular argument and to gain credit for one's individual perspective or research decisions" [141, p. 217]. In this respect M. Dževerdanović-Pejović [99, p. 26] interprets the use of *we* either as a signal of the author's modesty or as a means of reducing the author's responsibility for the article which weakens the writer's position:

e.g. **Our** investigation is thus based on almost 5,000 instances for British English and about 2,300 instances for American English [271, p. 286].

What **I** have tried to highlight is that comparative alternation is atypical in the panoply of sociolinguistic variables [253, p. 238].

However, we do not interpret the use of *we* as an indication of lack of author's confidence, but as a special emotional tone which emphasizes the importance of research, its reference to different expert sources and the necessity to further investigate the problem.

K. Flottum suggests four author roles manifested through the personal pronoun I:

1. The author as a writer, usually marked by discourse verbs which refer to the writing process or article structure (*describe, discuss, illustrate, outline, present, repeat, show, summarize and begin by, focus on, move on, (re)turn to, conclude by*).
2. The author as a researcher, typically marked by research verbs which refer to the research process (*analyse, assume, consider, choose, compare, explore, find, follow, limit, study, test, use*).
3. The author as an arguer, usually manifested by the words concerning approval, promotion or rejection (*argue, claim, dispute, maintain, propose, reject, think*).
4. The author as an evaluator, marked by emotional or evaluating constructions (*feel, be content to, be struck by, find something +evaluative adjective*) [107, p. 112].

According to the research conducted by K. Flottum the researcher role turned out to be the dominant one that happened in around the half of all first person singular pronoun occurrences (46% and 5% in the dual writer and researcher role). The writer role was found in around 25 % of all the cases, which proved its importance. The arguer role, on the contrary, proved to be of less importance as it only covered about 16 % of all the occurrences. It was quite expected that the evaluator role turned out to be the least important as it covers only about 4% of the occurrences [107, p. 113]. The analysis of articles from Journal of English Linguistics, International Journal of English Studies, ELT Journal proved the results obtained by K. Flottum. Thus, the researcher role also turned out to be dominant and followed by the writer's role. Of all the articles analysed we did not find any where the author played an evaluator role.

English academic texts are believed to be reader-friendly [142], they must fit together logically, and readers are usually helped through the text by means of discourse linkers which contribute to the reader's orientation in the text and its interpretations. Discourse linkers are described as "natural language expressions, whose primary function is to facilitate the process of interpretation of the coherence relation(s) between a particular unit of discourse and other, surrounding units and/or

aspects of the communicative situation” [212, p. 132]; have a “core meaning which is procedural, not conceptual, and their more specific interpretation is “negotiated” by the context, both linguistic and conceptual” [111, p. 950]; lexical items obtained from the syntactic classes of conjunctions, adverbials, and prepositional phrases that signal a relationship between the segment they introduce and the prior one [98, p. 130; 111, p. 950].

On the basis of scientific literature [68] and research articles analysis we can make the conclusions that the following discourse linkers are the most prominent and widely used in academic papers:

1. Reminders – expressions which remind the reader of the previously presented material and thus help the reader to understand the new portion of information in connection with the previously exposed. Authors usually employ a combination of a verb (*to state, to say, to suggest, to see* etc.) and an adverb of time or place: *as stated earlier, as suggested above, as already discussed* and others; expressions with the personal pronoun *we* (*as we have already seen, as we have already mentioned*). Reminders seem to be of great importance in academic discourse as they present the results of some investigations in connection with others and thus facilitate comprehension.

2. Announcers – expressions which inform the reader what information will be presented in future (*As it will be seen in the next section, I shall show below / Further, we shall discuss* and so on). They also help to comprehend the information coherently and build useful links between different portions of information.

3. Action makers – expressions that outline the immediate discourse activity of the author, such as summarizing, giving an example, outlining etc.: *to sum up, to give an example, to outline briefly* etc.

The analysis of the articles proved I. R. Galperin’s conclusion [9, p. 292] that the words used in academic texts usually preserve their primary logical meaning. There are almost no words with contextual meaning, and usually terms are provided with definitions to avoid ambiguity or misinterpretation. Often different definitions are analysed in an attempt to ground the most suitable one and clarify the author’s opinion.

To sound less dogmatic or show that the statement is merely an assumption writers usually use hedges, such as *probably, possibly, maybe, it seems* [235 p. 352].

e.g. *Perhaps we could even coin a new term, collocational construction, to be added to the arsenal of terms by means of which current phraseology is trying to give the best account of different types of combinations of words (formulaic expressions, idioms, lexical bundles, lexical phrases, phrasemes, etc.)* [273, p. 113].

*Instead, hearers try to understand the sentence as a whole, and in order to do so, they **probably** search in their memory for a previous experience where this sentence could fit, a situation where blue colour could become black for some reason* [268, p. 173].

Research articles use a high percentage of meaning-carrying words (lexical words) – nouns, verbs, adjectives, and adverbs and a lower percentage of grammatical words – pronouns, auxiliary verbs, conjunctions, prepositions, articles. In the 1970s J. Ure suggested a method for determining a lexical density of a text by calculating the percentage of lexical words. Ure's study showed that in spoken language grammatical words dominate (more than 60 %), the lexical density of a textbook was 50.2 %, whereas the lexical density of a research journal – 52.8 % [235, p. 354; 239, p. 159; 272, p. 445;]. In light of these findings we can make the conclusion that high lexical density of the research article may be another obstacle to comprehension and requests a lot of practice and developed lexical skills.

To sum up, we have studied the peculiarities of academic texts. The results of the conducted analysis should be taken into account for text selection criteria.

We can define text selection criteria as requirements to be used to make a decision about the expediency of usage a text for intensive or extensive reading.

In general, text selection criteria for both intensive and extensive reading are similar, though some peculiarities of the types of reading should be taken into consideration. First we will describe common criteria for extensive and intensive reading.

One of them is *authenticity*. To comply with this criterion the articles for teaching academic reading should be written by scholars whose mother tongue is

English, which give students exposure to native-speaker language, demonstrate them examples of good academic discourse and language functioning in a professional context, serve as a sample for students' further academic writing.

However, we should take into account the “changed landscape” of publications in English where the distinction between native and non-native is getting blurred as the main requirement to an article is the level of professional expertise and academic seniority [108]. Though native language standards are still required, there is also evidence that norms of academic English are becoming closer to the needs of non-native users [115; 172, p. 53]. More and more articles in recognized journals are published by non-native experts the topic and content of which may be of utmost interest to students. That is why though we still suggest selecting first of all articles written by native speakers, we find it possible to recommend reading articles of non-native scholars if they meet other criteria and are published in reliable and recognized sources.

The effectiveness of reading comprehension development hugely depends on reader motivation. Researchers subdivide the construct into dichotomies such as intrinsic versus extrinsic motivation and integrative versus instrumental motivation [73; 74]. Intrinsic motivation appears from within oneself, it is not imposed by others, whereas extrinsic motivation develops under the influence of some external factors (e.g., better employment opportunities). Most scholars agree that intrinsic motivation, both integrative and instrumental, is more important and powerful than extrinsic [73].

There are a number of investigations which strongly established that intrinsic motivation, self-efficacy and expectations for success are crucial for extensive reading and reading comprehension development [213; 230].

The survey, conducted among 59 philology students of Taras Shevchenko National University, demonstrated that most students are extrinsically motivated as most of them (73 %) indicated that they study the second language first of all for professional reasons (the text of the survey is presented in Appendix A, the results – in Appendix B). We should not underestimate extrinsic motivation which can be a powerful tool in encouraging students to read extensively. However, it is important for

teachers to facilitate the development of intrinsic motivation by selecting texts that arouse interest in students, demonstrating them that they can deal with academic texts successfully and can achieve their self-selected goals. So the second criterion of academic text selection is *motivational* which presupposes selection of texts which are of interest to the readers and create the atmosphere of success.

Another important criterion is *relevance to course topics* as texts should correspond to the topic areas of subjects (Lexicology, Stylistics, Literature, Methods of teaching etc.) that have been learnt or are being studied. To be able to understand the article, analyse the information and integrate the new knowledge with the existing one students should be familiar with the topic. It is important to avoid topics that go beyond the ones learned and students' conceptual reach as it will have a negative influence not only on the process of reading, but also on students' motivation to read. Besides, reading the suggested texts should help students in attaining curriculum goals and personal objectives. It is also very important that interdisciplinary links should be focused on. In such a way students not only develop reading comprehension, but also enrich their professional knowledge.

The criterion of *accessibility* is closely connected with the previous one and presupposes content and linguistic accessibility. Both the content and the language of the article can be quite challenging for the students and thus slow down reading and cause misunderstanding. Though in general the fourth-year students, who have to demonstrate level C1 in reading at the end of the course, should have enough linguistic knowledge and skills to comprehend research articles, the described above peculiarities of the genre testify that academic reading can cause some linguistic difficulties the most important of which are connected with vocabulary and use of long composite sentences. So the articles should mainly contain vocabulary familiar to the students or the one that can be easily translated with the help of dictionaries, understood from the context or found in readers' textbooks. It does not mean that all the terms used should be familiar to students, but readers should be able to determine their meaning either from the context or by looking up in accessible sources. In other words, word, recognition difficulty of the article should be moderate to promote

cognitive engagement in reading. Besides, it is necessary that the author's style be reader-friendly, and the author convey thoughts clearly and coherently. As for the content of the research article, it should be at least moderately familiar to the students [127, p. 63], which gives readers an opportunity to activate, use and expand background knowledge. Philology students must have sufficient subject knowledge to comprehend academic texts.

Another important criterion is *informational value of the text* which means that the information presented should be of importance to the reader. It is not the amount of new information that matters, but its value for the student at present and in future, and how well the new information correlates and integrates with the previous one and whether it can be used further.

The criterion of *scientific novelty* presupposes selection of modern articles from expert sources with high impact factor where scholars present the results of theoretical developments in the fields of linguistics and language learning. Among such sources the following can be recommended: Journal of Linguistics, Linguistic Inquiry, ELT Journal, the Journal of English Linguistics, English Language and Linguistics, the Australian Journal of Linguistics etc.

The texts should *stimulate and serve as a basis for different activities* essential for attaining learning targets. They should be thought-provoking and make it possible to elaborate different tasks for students to improve reading comprehension, critical thinking skills, practice use of strategies, further use the information from the text orally and in the written form. It is very important that the selected texts should contain information that can be used by students to achieve both short-term and long-term goals.

The last criterion for text selection is *length*. We think texts for intensive and extensive reading may differ in length. Reading intensively, students translate the text sentence by sentence into the first language and explain difficult pieces to better comprehend. As it is quite time consuming, texts for intensive reading should not be too long. The analysis of research articles showed that on average their length varies between 20 and 30 pages. Articles for intensive reading should be about 20 pages (we

may assume that some parts can be read intensively while others – extensively). As for extensive reading there is no need to establish limits for article length. In this case other criteria are of greater importance. It should be taken into account that if a longer texts have been chosen, they should be linguistically and conceptually within students' reach.

To sum up, we have determined and analysed the peculiarities of academic texts: impersonality, objectivity, neutrality, rationality, stringency, economy, content objectivity, descriptivity, accuracy, uniformity, clarity, precision, unambiguity, intertextuality and referentiality, use of unified terminology, avoidance of emotional and expressive elements, carefully and logically organised structure, use of long sentences loaded with content words, attitudinal adverbs, premodifiers and frequent nominalization, use of discourse linkers which contribute to the reader's orientation in the text and its interpretations.

Taking into account the above mentioned academic text peculiarities as well as curriculum requirements, we have presented and grounded the criteria for text selection: authenticity, motivating potential, relevance to course topics, content and linguistic accessibility, informational value, scientific novelty, stimulating effect for further activities, length.

It is necessary to point out that not only teachers but the students themselves should know the criteria as they will have to select texts. As for organizing extensive reading it is highly advisable to provide students with the range of texts to be chosen for extensive academic reading as well as to encourage them to look for some on their own and share them with groupmates. It is also useful to create a texts database and encourage students to add texts to the database created by the teacher.

2.2. Principles of teaching and the system of exercises and tasks for teaching reading English academic texts to philology students

Each methodology should be based on principles which can be viewed as requirements or recommendations that ensure its efficiency.

The analysis of the literature [4; 13; 22; 28; 35] shows that there are different principles of teaching reading. However, we will focus on those which are of major

importance for teaching philology students English academic reading: motivational learning, mastering the linguistic and subject knowledge and skills in a cyclical manner, development of students' academic reading as an integrated skill, profession-oriented learning, correspondence to the students' level of subject knowledge and language proficiency.

The first principle (*motivational learning*) is based on generalizing the results of research on the first language reading which prove that students can build intrinsic motivation to read through instruction [102; 123, p. 124; 207; 246]. We can assume that in foreign language context a proper instruction can also develop students' intrinsic and extrinsic motivation to read. According to the principle the materials provided and activities suggested should arouse students' interests, encourage them to use extra sources. The instructions to the exercises should be formulated in the way that demonstrates the purpose and thus motivates students to perform tasks. A variety of sources and activities as well as focus on individual learner help to develop students' motivation. Using authentic texts as well as creating and maintaining a supportive and collaborative learning environment through fast feedback, teachers attention to students needs, using pair and group activities etc. will contribute to developing students' motivation.

Mastering the linguistic and subject knowledge and skills in a cyclical manner is viewed as that opposed to a linear one. It means that previously taught material (vocabulary, structures etc.) is reintroduced in subsequent units and is connected with a new material. The suggested types of exercises and their sequence should be applicable to different texts. The students do the same or similar exercises (although changes and variations are possible) with a new text / set of texts on the same topic in class and as a homework. Each cycle has the same stages with reasonable variations.

The purpose of each cycle is to *develop students' academic reading as an integrated skill*. The main evidence for it is that language is viewed as a whole. Though teachers should develop different skills and students should be aware of it, if the language is broken into skills that are taught separately, the learner fails to comprehend it as a whole. Instruction should be planned around a curricular

framework that integrates goals for the development of academic reading skills. To do so, teachers should integrate content and language learning goals, promote building a large recognition vocabulary, create opportunities for comprehension skills practice, build students' academic discourse awareness, encourage use of strategies, provide meaningful intensive and extensive reading opportunities [123, p. 132]. Academic reading is closely connected, first of all, with speaking and writing. Thus, students learn linguistic, stylistic features of academic texts, select useful resources, write annotations, summaries etc. Speaking skills are developed during discussions, information interpretation in pair and group work. The instruction planned should integrate goals for the development of the above-mentioned skills and knowledge of the subject which the article deals with. In such a case main attention is paid to content matter of professional discipline, and the language skills are developed though purposefully, but to some extent implicitly [122, p. 116]. In other words, students master integrated knowledge and skills with the focus on the content matter.

According to the principle of *profession-oriented learning* all the texts are professionally oriented and exercises are aimed at the development of professional skills. The content and learning activities suggested should correspond to students' professional needs and interests. It also means developing skills in variable situations depending on the topic and content of the articles. Situations encourage students to actively participate in the activity, motivates them as the situations are mostly professionally oriented.

Correspondence to the students' level of subject knowledge and language proficiency means that an input provided should be just above the learner's current level to be comprehended without assistance [157]. If the input exceeds the students' level considerably, the following steps should be taken: 1) much preparatory work should be done, 2) students should be assisted in attaining the targets, 3) the task should focus on the points that students can cope with, 4) students should be encouraged to use extra resources to cope with the tasks and should not be much time limited.

All in all, we have determined the principles on which methodology of teaching reading academic texts to philology students will be based.

To work out a system of exercises and tasks it is necessary to define stages of teaching philology students English academic reading.

As for academic or professional settings there are different views on the stages of teaching reading. For example, E. Pomanisochka suggests three stages of teaching reading first-year philology students: orientation (aimed at preparing students to read authentic professional literature), corrective (activation and development of lexical and grammatical skills, the development of ability to find information from the texts) and teaching reading professional literature on the basis of authentic texts [25, p. 178].

B. Ye. Buteva considers the following stages of teaching reading technical students: 1) preparatory (aimed at preparing students to comprehend professional texts), 2) principal (which includes the three substages – pre-reading (linguistic difficulties elimination, anticipation of the content of the text), while-reading (comprehension of information from the text, its analysis), post-reading (checking comprehension)); final (evaluating comprehension) [6, p. 35–40].

Similar stages are suggested by O. V. Snehova. On the first stage the main attention is focused on linguistic difficulties elimination, developing fluency; on the second stage – on forming skills of different types of reading; on the third stage – on text interpretation (information analysis and evaluation, sociocultural interpretation, developing productive skills) [33, p. 115].

Studying the development of future engineers' reading skills in hypertext Yu. V. Romaniuk substantiated the following stages: 1) pre-reading (the development of lexical and grammatical reading skills, prognostic skills, skills of using on-line dictionaries); while-reading (the formation of reading comprehension and compensation skills), post-reading (the development of reading comprehension and compensation skills).

According to L. Ya. Lytvynenko teaching reading navigators should be done during four stages: cognitive (improving theoretical subject knowledge), preparatory (the formation of linguistic and linguosociocultural skills which prepare students to

read professional texts with focus on their lexical, grammatical and stylistic features and linguosociocultural peculiarities); reading authentic texts (integration of reading skills), productive (integration of reading with speaking and writing) [17, p. 100].

The analysis of the described approaches shows that scholars determine different stages of reading which depend on the focus of the investigation.

Taking into account the above-mentioned investigations, the features of academic texts (analysed in § 2.1), possible challenges and factors that facilitate the development of academic reading competence (determined in § 1.2) we determine in three stages of teaching philology students English academic reading:

1. *Preparatory stage* aimed at promoting students understanding of structural and linguistic features of academic discourse and developing their strategic awareness.

As it has already been mentioned in § 2.1, text-structure and linguistic awareness can be powerful means for a better academic text comprehension. For example, text-structure awareness helps to recognize discourse-signalling systems (distinguish the information of primary importance, connections and correlations between ideas in the text, signal words, organizing text information – cause and effect, problem and solution, comparison and contrast, analysis, synthesis, critique, classification, argument and evidence, chronological ordering, author's opinion etc.) [122, p. 212]. We also think that students should be aware of the effective academic reading strategies before they start reading texts.

On this stage students should also be prepared for self-directed reading (for example, they should learn how to select academic texts for extensive reading).

2. *Realization stage* is connected with reading a text. It consists of several sub-stages:

- pre-reading – activating students' background and subject knowledge, developing lexical, grammatical, prognostic skills;
- while-reading – developing reading comprehension as well as study skills;

- post-reading – improving academic reading comprehension skills, critical reading skills and study skills.

3. *Integrative stage* aimed at developing abilities to use the information from the text and integrate information from different sources. On this stage students should learn to use information in writing and speaking.

Developing L. Ya. Lytvynenko's ideas [17, p. 101] and taking into account the purposes of academic reading presented in § 1.2 (in particular, to analyse and critique texts and learn from texts), we suggest reading for a detail in class (with preliminary preparation at home which includes translation of unknown words, grammar analysis etc.). The conclusion has been made on account of the following factors: 1) the teacher is able to control the process and the results of reading in class; 2) reading for a detail is focused on students' understanding and analyzing all the details of the text and enables the teacher to control comprehension, detect gaps in students' subject, linguistic, study knowledge and skills and direct readers to fill them; 3) the teacher is able to emphasize the most important information; 4) reading for a detail gives a scope of opportunities for students to analyse the information, classify, synthesize, find arguments and evidence, compare and contrast it with that learned before etc., which should be discussed in class; 5) it also helps to focus on the most important and frequently used terms which students have to master and therefore be drawn attention to; 6) much attention is paid to students' collaborative work as we support the view that cognitive development is stimulated by social interaction.

For home assignment all types of reading can be used as: 1) students' time is usually not so strictly limited as during classes, 2) students may need to look for extra sources, which is problematic during classes, 3) doing various tasks readers will have to look through some texts employing different types of reading depending on the task and the text itself (its difficulty, content, etc.) as well as students' personal and professional interests, 4) within the text they may use different types of reading depending on the information presented.

Taking into account the theoretical foundations and the determined stages we have developed a system of exercises and tasks for teaching philology students English academic reading which correlates with the stages. On account of the determined in § 1.2 factors that influence efficiency of academic reading (learning goals, motivation, practice, subject knowledge, strategy use, social interaction, self-reflection, autonomy support, correctly organized instruction) in the suggested system: 1) all the exercises are motivated which means that the instructions contain explanation why the exercise should be done [31, p. 3]; 2) most exercises and tasks comprise a reflective component which will encourage students self-reflection and develop corresponding skills; 3) the purposes of the exercises and tasks are clearly stated and focused on with the aim of motivating students and helping them to set individual goals, 4) much attention is paid to activating subject knowledge, 5) strategy development is focused on at every stage; 6) teacher control is combined with self-control and peer control.

At the **preparatory stage** students should learn the main linguistic and structural features of academic texts, which will help them to better comprehend such texts, and get acquainted with effective strategies for academic reading. The preparatory stage includes three groups of exercises and tasks:

- 1.1. Promoting students understanding of structural features of academic discourse.
- 1.2. Promoting students understanding of linguistic features of academic discourse.
- 1.3. Building strategic awareness.

The preparatory stage exercises do not necessarily repeat in every cycle. If the students have acquired the necessary knowledge and developed awareness of discourse features and contemporary strategies, this stage can be omitted.

The examples of exercises and tasks presented below illustrate the suggested system.

Example 1. (G 1.1).

Purpose: building students' knowledge of structure of research articles, developing abilities to define structural features.

Type: reading and determining structural features of academic texts.

Implementation: individually or in small groups.

Control: by the teacher.

Instruction: *To comprehend articles it is necessary to know and understand their structure. Read the articles [268; 269] and characterize their structure. Represent them graphically. Find similarities and differences.*

Example 2. (G 1.2).

Purpose: building students' knowledge of structure of research articles, developing abilities to define and compare structural features, develop the ability to find and select articles.

Type: reading and determining structural features of academic texts, comparing them.

Implementation: individually or in small groups.

Control: by the teacher.

Instruction: *To comprehend articles it is necessary to know and understand their structural features and be able to select them. Look for some other articles in the Internet using the suggested sources or any expert sources in the field of Linguistics or foreign language teaching and analyze their structure. Compare the structure of the articles with the structure of those from the previous exercise.*

Internet resources:

<http://eltj.oxfordjournals.org/>

<http://revistas.um.es/>

<http://journals.sagepub.com/>

The articles to examples 1,2 are presented in Appendices C 1 and C 2.

Example 3. (G 1.2).

Purpose: building students' knowledge of linguistic features of academic texts, developing abilities to define these features.

Type: reading and determining linguistic features of academic texts, answering the questions.

Implementation: individually or in small groups.

Control: by the teacher.

Instruction: *To comprehend articles it is necessary to be able to predict possible challenges and prevent failure in understanding. That is why it is important to know and understand their typical linguistic features. Read the articles [268; 269] and do the following tasks:*

1. *Characterize the main features of academic style. Consider and find evidence of impersonality, objectivity, neutrality, uniformity, clarity, precision, unambiguity in the text.*

2. *Analyse means of intertextuality in the text. What functions do they perform? Find evidence in the text. Consider the information in the table:*

Remember:

Intertextual elements perform the following functions:

- *referential which is realized through references to other investigations, sources etc. to inform the reader about other researches closely connected with the article;*
- *evaluative which shows the author's attitude (positive or negative) to the information presented in another text;*
- *etiquette that demonstrates the respect to scientific community and particular scientific school;*
- *decorative which lies in embellishment of the text with quotes or references aimed at softening the style and strengthening the author's ideas.*

3. *Look for any emotional and expressive elements in the text, analyse them if there are any.*

4. *Analyse use of grammar. What are the main grammatical difficulties and what will be the most efficient ways to overcome them?*
5. *Analyse lexical features of the article. Are there any terms? How are they presented?*
6. *Find discourse linkers and define how they contribute to the reader's orientation in the text. Consider the information in the table:*

Remember:

The following discourse linkers are the most prominent and widely used in academic papers:

1. *Reminders – expressions which remind the reader of the previously presented material and thus help the reader to understand the new portion of information in connection with the previously exposed. Authors usually employ a combination of a verb (to state, to say, to suggest, to see etc.) and an adverb of time or place: as stated earlier, as suggested above, as already discussed and others; expressions with the personal pronoun we (as we have already seen, as we have already mentioned).*
2. *Announcers – expressions which inform the reader what information will be presented in future (As it will be seen in the next section, I shall show below, Further, we shall discuss and so on).*
3. *Action makers – expressions that outline the immediate discourse activity of the author, such as summarizing, giving an example, outlining etc.: to sum up, to give an example, to outline briefly etc.*

The texts of the articles are presented in Appendices C 1, C 2.

Example 4. (G 1.2).

Purpose: building students' knowledge of linguistic features of research articles, developing abilities to define and compare linguistic features, forming the ability to find and select articles, developing reflective skills.

Type: reading and determining linguistic features of research articles, comparing them.

Implementation: individually or in small groups.

Control: by the teacher.

Instruction: *To comprehend articles it is necessary to know and understand their linguistic features and be able to select them. Look for some other articles in the Internet using the suggested sources or any expert sources in the field of Linguistics or FL teaching and analyze their linguistic features. Compare the linguistic features of the articles with the features of those from the previous exercise.*

Internet resources:

<http://eltj.oxfordjournals.org/>

<http://revistas.um.es/>

<http://journals.sagepub.com/>

Reflection: *How important is it to be aware of linguistic features of the article? How does it contribute to the comprehension?*

Example 5. (G 1.3).

Purpose: developing strategic awareness, building knowledge of pre-reading strategies and forming skills to use the strategies, developing reflective skills.

Type: reading and employing the new strategies, analyzing their effectiveness.

Implementation: individually or in small groups.

Control: by the teacher.

Instruction: *As comprehension of articles can be quite challenging, experienced and effective readers use efficient strategies to understand the context better and monitor the process. Read the information about pre-reading strategies. Read the article [258] in detail employing the suggested strategies.*

Reflection: *Which of the strategies was of greater use? Why? When would you recommend to use concept maps and when generating questions?*

Strategy use:

Previewing strategies are particularly beneficial when reading articles because

they often have explicitly marked structure that help readers identify the goals of reading.

Previewing strategies involve looking through the text before reading which means surveying key parts of a text (the title, subheadings, the introduction, bold or italicized words, figures, tables, the conclusion, key sentences, data).

Previewing allows readers:

- *to become familiar with text contents;*
- *to mentally prepare to reading the material;*
- *to activate prior knowledge;*
- *to understand and take advantage of the text structure;*
- *to identify the main themes or problems of the text.*

The reader can increase the effectiveness of previewing by generating a concept list or map based on the key points of the text.

Concept maps can be produced before, during, or after reading. When used before reading, concept maps can be viewed as a special advanced organizer that transforms texts into a graphic representation to indicate the links between key ideas. Concept maps arrange main points, placed in geometric shapes, in hierarchical order.

Another strategy – generating prereading questions which helps readers to better formulate their reading goals and activate relevant prior knowledge about the text. If you have questions, you will try to seek answers to them while reading and it will help to manage comprehension process. For example, readers may generate questions about theories identified while previewing [176, p. 474-476].

The text of the article is presented in Appendix C 3.

Example 6. (G 1.3).

Purpose: developing strategic awareness, building knowledge how to figure out the meaning of unfamiliar words and forming skills to use the strategies, developing reflective skills.

Type: reading and employing the new strategies, analyzing their effectiveness.

Implementation: individually.

Control: by the teacher, self-control (with the help of the keys).

Instruction: *Reading an article you will come across unknown words which are not always necessary to look up in a dictionary, but can be guessed with the help of different clues. Read the information about strategies which help figure out the meaning of unfamiliar words. Read the fragments and guess the meaning of the words in bold using context clues.*

Reflection: *Which of the strategies was of greater use for each fragment? Why?*

Strategy use:

There are two ways you can figure out the meaning of unfamiliar words:

1. *Pay attention to context clues which will help you figure out the meaning of a word without consulting a dictionary.*
2. *Analyse word parts.*

Scholars use different types of context clues which may help you define the meaning of an unfamiliar word:

1. *Punctuation (commas, dashes, brackets, or parentheses which set words off from the rest of a sentence). For example, when dashes set words off, they indicate their importance; when parentheses or brackets set them off, they emphasize the words are not very important.*
2. *Restating material (often between punctuation) to clarify the meaning.*
3. *Synonyms (often introduced with the help of or, also known as, in other words).*
4. *Antonyms (introduced with on the other hand, however, although, unlike).*
5. *Definitions that explain briefly the meaning of a word.*
6. *Examples that illustrate the meaning of a word ((introduced with for example, such as, for instance) [250, p. 136–139].*

Fragment 1.

One of the major consequences of the current phase of economic globalization has been the emergence of English as the leading lingua franca of international business, and this in turn has intensified demand for courses of various kinds in Business English. Such courses share essentially the same objective: to develop

*students' ability to use English effectively in the increasingly globalized world of work. This fundamental aim is reflected (for example) in promotional materials disseminated by private language training institutes, in curriculum documents developed by university language centres and, most conspicuously, in the prefaces and **blurbs** that appear in the everexpanding array of textbooks and study guides produced by commercial publishers [254, p. 281].*

Fragment 2.

*A learning style is not in itself an ability but rather a preferred way of using one's abilities (Sternberg 1994). Individuals have different learning styles, that is, they differ in their 'natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills' (Reid 1995: viii). Learning styles are typically **bipolar entities** (for example reflective versus impulsive, random versus sequential), representing two extremes of a wide continuum; however, where a learner falls on the continuum is value neutral because each extreme has its own potential advantages and disadvantages [257, p. 488].*

Fragment 3.

*The notion that some words occur more frequently in academic texts than in other **domains** is uncontroversial and seems to fit well with EAP's distinctive approach to language teaching, based on identifying and teaching features specific to the particular disciplinary needs of learners. But while this general academic vocabulary might seem to offer good learning returns with less investment of time and effort, the view that students should be developing a general academic vocabulary is actually quite **contentious** [258, p. 113].*

Example 7. (G 1.3).

Purpose: developing awareness of academic texts selection criteria, developing skills of academic text selection, reflective skills.

Type: skimming, text selection.

Implementation: individually.

Control: self-control, peer-control.

Instruction: It is necessary to be able to select appropriate academic texts. Read the information below about text selection criteria and select 3 articles you would like to read using the suggested criteria.

Remember!

Article selection criteria:

- *authenticity* – the articles for teaching academic reading should be written, first of all, by scholars whose mother tongue is English, which give you exposure to native-speaker language, demonstrate examples of good academic discourse and language functioning in a professional context; however, it is possible to select articles of non-native scholars if they meet other criteria and are published in reliable and recognized sources;
- *motivational* – selection of texts which are interesting to the readers and create the atmosphere of success;
- *relevance to course topics* – texts should correspond to the topic areas of subjects (Lexicology, Stylistics, Literature, Methods of teaching etc.) that have been learnt or are being studied;
- *accessibility* – word recognition difficulty of the article should be moderate; the author's style must be reader-friendly, and the author should convey thoughts clearly and coherently; the content of the research article should be at least moderately familiar to you;
- *informational value of the text* – the information presented should be important to the reader in present or future and correlate with the previous one;
- *scientific novelty* – selection of modern articles from expert sources with high impact factor where scholars present the results of theoretical developments in the fields of linguistics and language learning;
- *ability to stimulate and serve as a basis for different activities* – articles should be thought-provoking and contain information that can be used by students to achieve both short-term and long-term goals;
- *length* – articles for intensive reading should be about 20 pages; no limit in case of extensive reading; if a longer texts have been chosen, they should be linguistically and conceptually within students' reach.

Reflection: 1. To analyse the appropriateness of the selected articles fill in the table below. Analyse it.

2. What difficulties did you encounter selecting the articles? Is it necessary to use all the mentioned criteria?

3. Would you like to add any other criteria? Why?

Text	Criteria							
	authenticity	motivating potential	relevance to course topics	content and linguistic accessibility	informational value	scientific novelty	stimulating effect for further activities	length
1								
2								
3								

The stage of realization consists of three substages. The pre-reading substage is aimed at preparing students to read a particular text, preventing comprehension breakdown which may be caused by the difficulty of the text and lack of students knowledge and skills. It is very important to help readers understand and establish purposes for reading a particular text which will help them use appropriate reading styles. There is a view that students' reading comprehension depends more on their prior experiences, knowledge of the topic, vocabulary than their cognitive ability [182, p. 325]. One of the most effective ways to improve comprehension is to activate subject knowledge [145]. Speaking that precedes reading can be rather stimulating in improving all levels of comprehension from recall to critical thinking [55]. The idea of decontextualised learning as part of reading development [123, p. 109] is also implied on the stage especially for key words learning or grammar structure analysis.

The pre-reading substage comprises the following groups of exercises and tasks:

- 2.1. Activating subject knowledge.
- 2.2. Developing prognostic skills.
- 2.3. Developing lexical skills.
- 2.4. Developing grammatical skills.

Example 8. (G 2.1).

Purpose: activating knowledge of the comparative links *as if*, *as though* and *like*.

Type: answering the questions.

Implementation: individually, in pairs.

Control: by the teacher.

Instruction:

Task 1. *Before reading a text it is useful to analyse what you already know on the topic. It will help the reader to link the new information with the one learnt and better understand the content. Look at the title of the article [261]. What is it about? When are the comparative links as if, as though and like used? Give examples.*

The title: On the Use of As If, As Though, and Like in Present-Day English Complementation Structures

Task 2. *Explain the difference between the grammatical structures in the following sentences “He talks as if he had a potato in his mouth” and “It looks as if it’s going to rain”.*

The text of the article is presented in Appendix C 4.

Example 9. (G 2.1).

Purpose: activating subject knowledge.

Type: reading and answering the questions.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: *Before reading a text it is useful to look through the whole text, the annotation or just the first paragraph / paragraphs to understand what it is going to be about and recall what you already know on the topic. It will help the reader to link the new information with the one learnt and better understand the content. You are going to read an article under the title “Generation” [263]. Look through the first paragraph and try to recall what you know about Generative Learning theory.*

The text of the article is presented in Appendix C 5.

Example 10. (G 2.2).

Purpose: developing prognostic and reflective skills.

Type: answering the questions, anticipating the general content of the article.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: *It is very important for the reader to be able to anticipate the structure and the content of the article as it will help the reader understand what to look for and what to focus on. Look at the title of the article [270] and the key words. What is it going to be about? Read the article to find out whether your predictions were right.*

The title: Where do Phonemes Come from? A View from the Bottom.

The key words: phoneme; perception; structuralism; categorization; unsupervised learning; basic level.

Reflection: *If you were wrong, analyse the reasons: lack of subject knowledge, unknown words, lack of experience etc.*

The text of the article is presented in Appendix C 6.

Example 11. (G 2.2).

Purpose: developing prognostic and reflective skills.

Type: answering the questions, making predictions on the basis of the abstract.

Implementation: individually, in pairs.

Control: self-control.

Instruction: *After the title of the article there is usually an Abstract approximately 100–250 words long which states the purpose of the article, summarises main ideas and key findings. It is useful to look through the abstract before reading to get the general idea of the article, anticipate what you need to look up and which subject knowledge to activate.*

Task 1: Read the following abstract and answer the following questions:

1. What will be the main points of the article?
2. What additional knowledge you may need?
3. What could be the main points of the debate on the national television?
4. Was the feedback about the ad mainly positive or negative?
5. How can Newfoundland varieties of English differ from mainland Canadian English?
6. Why were the subtitles in the ad used?

Task 2: Read the article. Where your predictions right? Did they help you in reading?

Reflection: Is it important to make predictions about the article you are going to read? Why? How can readers anticipate the contents of the article? Suggest your own ways.

Abstract:

This article involves an analysis of a television commercial set in rural Newfoundland, Canada in which the main actor's performance of Vernacular Newfoundland English is accompanied by subtitles consisting of ostensibly humorous nonparallelisms rendered in Standard English. The discursive strategy employed by the ad's creators, of highlighting difference, "others" the character and by extension actual speakers of the local variety. The appearance of the commercial on national television resulted in intense debate, particularly in Newfoundland and to some extent in mainland Canada. A video parody responding to the original commercial and an online discussion of the issues on a variety of Web sites are also analyzed. The debate focuses on (in)authenticity (in particular, on who has the right to perform the vernacular) and on the commodification of regional language and culture in media representations [259, p. 262].

Example 12. (G 2.3).

Purpose: developing lexical and reflective skills.

Type: reading, translating, working with the dictionary, learning new words.

Implementation: individually, in pairs.

Control: by the teacher, peer-control.

Instruction: *Vocabulary knowledge is extremely important for academic reading. Read the abstract. Translate it into Ukrainian in the written form guessing the meaning of unknown words. Underline the unknown words which made the translation difficult. Look them up in the dictionary and correct your translation. Compare the two translations. Learn the new words.*

Abstract:

Infants have a remarkable ability to perceive all manner of phonetic contrasts. The phonological categories of a language, however, have to be learned from experience. Two learning paradigms are contrasted – supervised learning (where learners receive feedback on their categorization attempts) and unsupervised learning (where learners rely only on properties of the input). It is argued that unsupervised learning may be the appropriate paradigm, at least for the initial stages of acquisition. Thereafter, the emergence of phoneme categories draws on various kinds of knowledge available to the learner, including knowledge of articulation, and of literacy conventions. A concluding section emphasizes the taxonomic nature of the phoneme, and suggests that the special salience of a phonemic representation reflects the status of the phoneme as a basic level category [270, p. 19].

Reflection: 1. *How important are lexical skills for article comprehension? What are the peculiarities of the research article vocabulary?*

2. *Analyse the two variants of translation. Do they differ greatly? Do you have an appropriate level of lexical skills? Are you going to develop them? If yes, how.*

Example 13. (G 2.3).

Purpose: developing lexical skills.

Type: reading, translating, defining key words, working with the dictionary, using key words.

Implementation: individually, in pairs.

Control: by the teacher, peer-control.

Instruction: Comprehension of the text depends greatly on lexical skills. Read the fragment of the article. Write down the key words of the passage. Translate them. Using the key words render the main idea of the fragment.

To see what reading speed goals it is sensible to aim for, we need to understand the physical nature of reading and how this relates to reading speed. There are many misconceptions about reading faster, particularly about how fast people can read, and these can be cleared up by looking at the physical nature of reading. When people read, three types of action are involved - fixations on particular words, jumps (saccades) to the next item to focus on, and regressions (movements back to an item already looked at). This means that while reading the eyes do not move smoothly along a line of print, but jump from one word to another. There has been a great deal of research on eye movements while reading and recent improvements in eye tracking technology have confirmed the following findings [265, p. 132].

Example 14. (G 2.4).

Purpose: developing grammatical skills, activating prior knowledge.

Type: translation.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: Comprehension of the text depends greatly on how well readers can understand grammar structures. Give examples of the Subjective Infinitive Construction. Find the Subjective Infinitive Constructions in the following sentences taken from the text you are going to read. Translate them into Ukrainian.

1. Reading in English is consistently shown to be of great concern to Non-Native English speaking students at tertiary level and understanding previously unencountered 'technical' vocabulary and 'difficult words' appears to cause the greatest trouble.

2. This vocabulary is seen as contributing an important element to an 'academic style' of writing and being 'more advanced' than the core 2,000 to 3,000 words that typically comprise around 80% of the words students are likely to encounter in reading English at university.

3. *But while this general academic vocabulary might seem to offer good learning returns with less investment of time and effort, the view that students should be developing a general academic vocabulary is actually quite contentious.*

4. *Despite its high frequency in all three fields, the word process is far more likely to be encountered as a noun by science and engineering students than by social scientists.*

5. *We believe this is therefore likely to present difficulties to both native and non-native English speaking students.*

6. *The notion that some words occur more frequently in academic texts than in other domains is uncontroversial and seems to fit well with EAP's distinctive approach to language teaching, based on identifying and teaching features specific to the particular disciplinary needs of learners.*

7. *First year undergraduate students are said to find academic vocabulary a particularly challenging aspect of their learning because, unlike technical vocabulary, it serves a largely supportive role and items are "not likely to be glossed by the content teacher"*

8. *Analyze seems to be used differently across fields, occurring regularly as a noun in the social sciences but with engineering students six times more likely to come across the form analytical [258].*

While-reading sub-stage includes four groups of exercises and tasks. Though there is a special group of exercises (G 2.5) on developing study skills, students are supposed to employ effective strategies while doing exercises and tasks from other groups (G 2.6–2.8). So study skills are further developed simultaneously with building reading comprehension skills. We have developed a separate group for improving study skills (G 2.5) as there are strategies that should be taught separately at this stage. Groups G 2.6–2.8 focus on developing reading comprehension skills for different types of academic reading – skimming, scanning and reading for a detail.

The **while-reading sub-stage** consists of the following groups:

2.5. Developing study skills.

2.6. Forming academic reading comprehension skills: skimming.

2.7. Forming academic reading comprehension skills: scanning.

2.8. Forming academic reading comprehension skills: reading for a detail.

Example 15. (G 2.5).

Purpose: developing strategic awareness, building metacognitive strategies, developing reflective skills.

Type: reading with strategies (annotating, highlighting, underlying etc.).

Implementation: individually, in pairs.

Control: self-control.

Instruction:

Task 1. *To better comprehend the text it is beneficial to use strategies. Read the fragment of the article (part II (The Scope of Context in Linguistics) from the article by Requejo M. D. P. «The Role of Context in Word Meaning Construction: A Case Study» [268]) and apply the strategies suggested in the table.*

Task 2. *Next day review what you have highlighted or/ and annotated and be ready to summarise the key points of the fragment.*

Reflection: *Compare your notes with those of your friend. Did you experience the same difficulties? How helpful are the strategies?*

The text of the article is presented in Appendix C 1.

Strategy use:

- *as you read, underline or highlight key passages and make notes or brief annotations in the margins of the copy; later reviewing your notes you can easily recall the key points;*
- *do not underline or highlight most of the article – only key points;*
- *annotation can be used to record immediate reactions, questions, summarize main points, evaluate them and relate the reading to other ideas and points of view;*
- *annotate briefly and selectively:*
 - *write comments, definitions, draw mini-diagrams in the margins;*

- use hints or clues, notes like “really?,” “great,” “compare with ...,” and “check this,” “look up” etc.;
 - connect ideas with lines or arrows; number related points;
 - use boxes to highlight names you need to remember;
 - draw circles to highlight key points, key terms, new words, statistics, dates, unfamiliar words;
 - use colon to signal the simpler or more specific restatement of a complex or general thought;
 - use equals sign to signal a definition;
 - put exclamation points to indicate your agreement with the author’s statement or a surprise at it.
- you can annotate not only printed pages, but also most texts on-screen by using software’s highlighting and commenting functions or by typing annotations into the text using a different color;
 - notes may be done in nonlinguistic forms, such as sketches, concept maps etc.;
 - notes should be meaningful and reviewable to the reader so check your annotations at the end to see if reading just them makes enough sense for you [56, p. 504; 62, p. 33-34; 106, p. 13-15].

Example 16. (G 2.6).

Purpose: forming skimming skills, developing reflective skills.

Type: answering True/False questions.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: It is necessary to develop skimming skills to be able to grasp the main idea and major details of the text. Skim the article [262] using useful strategies. What is the main idea? Answer the following True/False questions:

1. Teenagers tend to introduce changes into language. T/F
2. Cognitive factors is the major reason of configuration of children's and adolescents' language. T/F
3. The Bergen Corpus of London Teenage Language (COLT) is representative of London teenage speech. T/F
4. The author regarded as negative the grammatical items that are negative from a syntactic and a semantic perspective. T/F
5. The results of the analysis demonstrated the extremely high frequency of negation. T/F
6. The results of the analysis demonstrated a low frequency of negative concord. T/F
7. Teenagers use negation to intensify the message. T/F
8. Teenagers use negation to play and experiment with language. T/F
9. The study showed a low occurrence of innovative forms with a negative prefix (e.g., uncool, unscrewable). T/F
10. Hedgings of negative statements is typical of adult language. T/F

Reflection: What strategies did you use? Were they helpful? What difficulties did you encounter?

The text of the article is presented in Appendix C 7.

Example 17. (G. 2.7).

Purpose: forming scanning skills, developing reflective skills.

Type: answering multiple choice questions.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: It is necessary to develop scanning skills to be able to find the necessary information in the text. Scan the article [262] using useful strategies. Find the necessary information to answer the following questions:

1. Adolescents are responsible for new developments at:
 - a) the level of syntax;
 - b) the level of phonology;

- c) *almost all levels of the language;*
 - d) *the level of morphology.*
2. *The Bergen Corpus of London Teenage Language (COLT) was compiled in:*
- a) 1993;
 - b) 1996;
 - c) 2000;
 - d) 1991.
3. *COLT corpus consists of:*
- a) 410.000 words;
 - b) 470.000 words;
 - c) 431.528 words;
 - d) 450.000 words.
4. *Among the grammatical forms analysed by the author there are the following:*
- a) *the particle not, none, nowhere, neither;*
 - b) *not as a modifier to several determinatives, none, nowhere, neither;*
 - c) *neither...nor, never, none, nor, nothing, hardly;*
 - d) *no, lexical words with an inherent negative meaning, the particle not, none, nowhere.*
5. *Among the words containing a negative prefix in the language of adults the most frequently used was:*
- a) *unlikely;*
 - b) *unusual;*
 - c) *unfortunate;*
 - d) *impossible.*
6. *Exclusive to the teenagers' talk was:*
- a) *uncertain;*
 - b) *unusual;*
 - c) *undo;*
 - d) *inefficient.*

7. *Exclusive to the language of adults was:*

- a) *unfortunate;*
- b) *unusual;*
- c) *undo;*
- d) *inefficient.*

8. *The article explores:*

- a) *the role of geographical factor in innovative nature of teenagers' language;*
- b) *the role of education factor in innovative nature of teenagers' language;*
- c) *the pragmatics of negative concord structures;*
- d) *the influence of age factor on the language used.*

Reflection: *What strategies did you use? Were they helpful? What difficulties did you encounter?*

The text of the article is presented in Appendix C 7.

Example 18. (G. 2.8).

Purpose: forming reading for a detail skills, developing reflective skills.

Type: summarizing ideas of the paragraphs.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: *It is necessary to develop reading for a detail skills to be able to comprehend all the details of the text. Read the text [257] employing effective strategies and summarise the main idea of each paragraph in one sentence.*

Reflection: *Does summarizing the main idea of each paragraph help to comprehend the meaning of the text?*

The text of the article is presented in Appendix C 8.

Efforts to improve comprehension continue after reading because while reading students do not and in case of research article reading cannot comprehend the text content globally. The information should be analysed, synthesized, compared with the one learned before and reprocessed via different post-reading activities. On the post-reading

stage there is a separate group of exercises (G 2.9) to improve study skills, namely increase students' awareness of the critical reading strategies. The students are supposed to apply these strategies to complete the exercises and tasks of the subsequent groups (G 2.10–2.11) that focus on further development of academic reading comprehension skills (scanning, skimming, reading for a detail) and building and developing critical reading skills.

At the **post-reading sub-stage** there are three groups of exercises and tasks:

2.9. The improvement of study skills.

2.10. Developing academic reading comprehension skills.

2.11. Developing critical reading skills.

Example 19. (G. 2.9).

Purpose: developing students metacognitive and cognitive skills, developing reading comprehension and reflective skills.

Type: generating questions, pair discussion.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: *To better comprehend an academic text it is advisable to use efficient strategies (table below) which help to analyse the information critically. Generating questions is one of such strategies. Generate questions to the text you have read, find answers to them. Compare your questions with your friend's. Discuss them.*

Reflection: *How useful is the strategy? What difficulties did you encounter generating and discussing questions?*

Strategy use:

To read articles critically and handle difficult material with confidence the following strategies may be employed:

- *outlining: listing the text's main ideas to reveal how it is organized (it may be written on the margins of the text or on a separate piece of paper which gives you more space to include more detail; you must decide when to use the author's words, your own words, or a combination of the two); grouping all the*

notes on the text to understand it globally;

- *summarizing the main ideas of the text (summaries may vary in length depending on the purpose and the text itself);*

- *paraphrasing: restating what you have read to make it more clear to understand;*

- *synthesizing the information of different sources;*

- *integrating the ideas and information from the text into your own;*

- *looking for cause-effect oppositions;*

- *examining your personal responses to a text based on your ideas and values;*

- *comparing and contrasting related readings;*

- *determining how well the logic of an argument is reasoned and supported;*

- *recognizing errors in reasoning or ambiguities;*

- *evaluating how well the author represents different points of view and knows the topic;*

- *generating questions as a form of self-testing (“What is the most important point of the article?” “What idea is supported in the paragraph?” “How is ... related to?” etc.) as they help to activate processing, go beyond the text and determine what should be reread, learnt from the text [56, p. 507-516; 176, p. 483].*

Example 20. (G. 2.10).

Purpose: developing reading comprehension skills, reflective skills; evaluating student’s comprehension of the text.

Type: answering questions.

Implementation: individually, in pairs.

Control: by the teacher, self-control.

Instruction: Read the article in detail [262]. Answer the following questions:

1. When did context become one of the main focus in linguistics?
2. What is semantic anomaly and when does it occur?

3. *What is linguistic and situational context?*
4. *How is context described in Cognitive Linguistics?*
5. *What are the main factors of meaning construction?*
6. *What is pragmatics?*
7. *What is coded meaning?*
8. *How does the author prove that the individual experience and background knowledge of the participants are important factors in meaning construction?*
9. *Give your own examples to illustrate the statement that context comes first.*

Reflection: *How does reading for a detail differ from skimming and scanning?*

What difficulties may arise?

The text of the article is presented in Appendix C 7.

Example 21. (G. 2.11).

Purpose: developing reading comprehension skills, critical reading skills, reflective skills.

Type: summarising.

Implementation: individually, in mini-group.

Control: by the teacher.

Instruction: To comprehend the text globally and analyse it critically it is helpful to summarize it. Write a summary of the article by Nation P. “Reading Faster” [265]. Compare your summary with the ones of your friends’. Discuss and make a group version of the summary.

Reflection: Did the summary help you to comprehend the text better? What are the challenges of the summary?

The text of the article is presented in Appendix C 9.

Remember:

The goal of a summary is to retain the most important information of the article: its main idea along with essential details that explain or prove the writer’s point.

The integrative stage consists of two groups of exercises and tasks:

- 3.1. Developing abilities to integrate information from different sources.
- 3.2. Developing abilities to use the information from the text.

Example 22. (G. 3.1).

Purpose: developing abilities to synthesize information, developing reflective skills.

Type: reading, comparing and contrasting information, summarizing.

Implementation: individually, in mini-group.

Control: by the teacher.

Instruction: *It is very important to learn to synthesize information from different sources to be able to use it in professional settings. Find several articles that deal with the same topic in the field of foreign language teaching. Analyse critically the information, compare and contrast it, synthesize it into a presentation which should cover the following:*

1. *Importance of the topic.*
2. *The overview of the recent research on the topic.*
3. *Main ideas.*
4. *The problems that need further investigation and analysis.*

Reflection: *Think on the following:*

1. *Did your presentation cover all the necessary parts?*
2. *Analyse how each part was presented.*
3. *Do you think students understood the ideas you presented? If no, why?*
4. *Do you think you personally understand the topic you presented?*
5. *What information needs further study?*
6. *What would you like to change in your presentation?*
7. *Do you think you selected appropriate sources? What selection criteria did you use?*
8. *Do you think you need to read more on the topic?*
9. *Is the topic interesting to you?*
10. *Were you able to get students interested in the topic?*

Remember:

To synthesize ideas and information from different sources it is necessary:

- *to find and read a variety of expert sources on your topic, annotate them to discern the meaning;*
- *compare and contrast them;*
- *compare the received information to that you already have;*
- *synthesize the information from different sources using quotation, paraphrase, and summary to present what they say on the topic [56, p. 521].*

Example 23. (G. 3.2).

Purpose: developing abilities to use information in professional context, developing reflective skills.

Type: presentation.

Implementation: individually.

Control: by the teacher.

Instruction: *You are a teacher in high school. Using information from the article “The Role of Context in Word Meaning Construction: A Case Study” by M. D. P. Requejo [268] explain your students the role of the context in word meaning construction. Apply examples from different sources (TV, media etc.).*

Reflection: *Think on the following:*

1. *Do you think students understood the material you presented? If no, why?*
2. *Do you think you personally understand the topic you presented?*
3. *What information needs further study?*
4. *What would you like to change in your presentation?*
5. *Do you think you need to read more on the topic?*
6. *Were you able to get students interested in the topic?*

The text of the article is presented in Appendix C 1.

The suggested system of exercises and tasks is summarized in Table 2.1. Much attention in the system is paid to students' collaborative work as we support the view that cognitive development is stimulated by social interaction. So collaborative activities can be beneficial for increasing intrinsic motivation.

Table 2.1

System of exercises and tasks for teaching reading English academic texts to philology students

Stage	Sub-stages	Sub-system of exercises and tasks	Groups of exercises and tasks	Types of exercises and tasks
Preparatory		Sub-system 1 aimed at promoting students understanding of features of academic discourse and building strategic awareness.	Group 1.1. Promoting students understanding of structural features of academic discourse.	determining structural features of academic texts, looking for similarities and differences in different texts, determining structural features of academic texts, comparing them; employing new strategies and analyzing their effectiveness;
			Group 1.2. Promoting students understanding of linguistic features of academic discourse.	
			Group 1.3. Building strategic awareness.	
Realization	Pre-reading	Sub-system 2 activating students' background and subject knowledge, developing lexical, grammatical, prognostic skills	Group 2.1. Activating subject knowledge.	anticipating the general content of the article, making predictions on the basis of the abstract/key words, translation, working with the dictionary, learning new words, studying a set of word-pair translations, defining key words, matching, filling gaps with
			Group 2.2. Developing prognostic skills.	
			Group 2.3. Developing lexical skills.	
			Group 2.4. Developing grammatical skills.	

	While-reading	Developing academic reading comprehension skills, study skills	Group 2.5. Developing study skills.	words, reading with strategies, examining a difficult paragraph, confirming predictions, clarifying comprehension, determining clues that indicate major patterns of organisation, answering True/False questions, answering questions, answering multiple choice questions, determining main idea of each paragraph, completing an outline of the text, correcting false statements, generating questions, pair discussion, group discussion.
			Group 2.6. Forming academic reading comprehension skills: skimming.	
			Group 2.7. Forming academic reading comprehension skills: scanning.	
			Group 2.8. Forming academic reading comprehension skills: reading for a detail.	
	Post-reading	Improving academic reading comprehension skills, critical reading and study skills	Group 2.9. The improvement of study skills.	
			Group 2.10. Developing academic reading comprehension skills.	
			Group 2.11. Developing critical reading skills.	
Integrative		Sub-system 3 developing abilities to use the information from the text and integrate information from different sources	Group 3.1. Developing abilities to integrate information from different sources.	comparing and contrasting information from different sources, summarizing it, class presentations, pair discussion, group discussion, writing thesis, resume etc
			Group 3.2. Developing abilities to use the information from the text.	

All in all, teaching reading English academic texts to philology students should be based on the following principles: motivational learning, mastering the linguistic

and subject knowledge and skills in a cyclical manner, development of students' academic reading as an integrated skill, profession-oriented learning, correspondence to the students' level of subject knowledge and language proficiency.

A system of exercises and tasks for teaching reading English academic texts to philology students that consists of three sub-systems, each of which comprises groups of exercises and tasks, has been developed and presented in the thesis.

The next task is to build the model of teaching reading English academic texts to philology students.

2.3. Model of teaching reading English academic texts to philology students

Education has always focused on providing students with a lot of information. What is really needed for efficient learning is a properly modelled learning process which takes into account general goals, students' specific goals, learning process itself etc.

The purpose of this section is to substantiate the model of teaching reading English academic texts to philology students based on the determined theoretical foundations and stages of teaching English academic reading as well as the suggested system of exercises and tasks.

Modelling is a research method which allows to study not the object, but its model. The model represents the structure of the object, its content and relations between the components [1], it depicts "theory's variables, mechanisms, constructs, and interrelationships" [234, p. 620]. In other words, it is based on theory and empirical data and depicts this combination in a comprehensive way [169, p. 86]. E. G. Azimov and A. M. Shchukin describe an educational model as a teacher's individual interpretation of the method in accordance with goals and conditions [1, p. 159].

Scientific literature analysis [1 ; 11; 36] enabled the conclusion that the model of teaching reading English academic texts to philology students should be relevant to the principles of teaching determined in the previous section (motivational learning, mastering the linguistic and subject knowledge and skills in a cyclical manner,

development of students' academic reading as an integrated skill, profession-oriented learning, correspondence to the students' level of subject knowledge and language proficiency); presuppose coherence, unity, interconnection dependencies of its components, consistency, consider peculiarities of the module system.

To build the model it is necessary to take into account the object, purpose, subjects, expected results, students' level, the university subject/subjects the model represents, learning aids, assessment of the achievements [36, p. 146–147].

The *object* of the model is the process of teaching philology students English academic reading.

The *purpose* of the model is determining the succession of teacher's action aimed at developing academic reading competence.

The *subjects* of the study are the fourth-year future philologists who should demonstrate level C1 in reading [26, p. 112].

It is expected that the students should form the ability to understand the gist and details of academic texts, analyse them critically adjusting the type of reading and the strategies used to the purpose.

Though the model is implemented within the *subject* "Practical English", it also incorporates and extends to other subjects in the field of linguistics and applied linguistics (Methods of English Language Teaching, Lexicology, Stylistics etc.) which fourth-year future philologists study or are already acquainted with according to the curriculum. Reading academic texts they do not only develop academic reading comprehension skills, but also improve subject knowledge and develop a more global understanding of linguistics. Therefore there should be a strict correlation between the topic and content of the article and what students already know or are expected to know otherwise comprehension may break and, what is more, students' motivation may decrease.

To evaluate students' academic reading comprehension skills (determined in § 1.2) different forms of assessment are used: 1) formative with the aim of detecting problems both in teaching and learning and preventing them from becoming worse; 2) a module assessment at the end of each module the purpose of which is not only to

measure student's achievements, but also to inform about the gaps, and 3) a final assessment at the end of a semester. Besides, formative assessment includes self-assessment.

Assessment plays a key role as it should motivate students, develop skills, provide feedback about student progress, build self-confidence, develop reflection [119, p. 2]. To provide a high quality instruction there should be correspondence between teaching, evaluation and results.

Self-assessment is a process of students' monitoring and evaluating their learning with the aim of improving performance in case of discrepancies between current and desired performance as well as current and desired results [175, p. 40].

Developing J. H. McMillan and J. Hearn's [175, p. 41] view self-assessment can be described as a cyclical and ongoing process which consists of four components: learning goals, self-monitoring, self-evaluation, selection and implementation of necessary correctives if needed (see Figure 2.1). Students identify personal goals, monitor their learning and evaluate themselves on the basis of well-understood criteria (determined by the teacher or ideally by the teacher and the students together – such collaboration will allow students to understand the criteria better), and determine the next steps to enhance their own performance and attain the targets set.

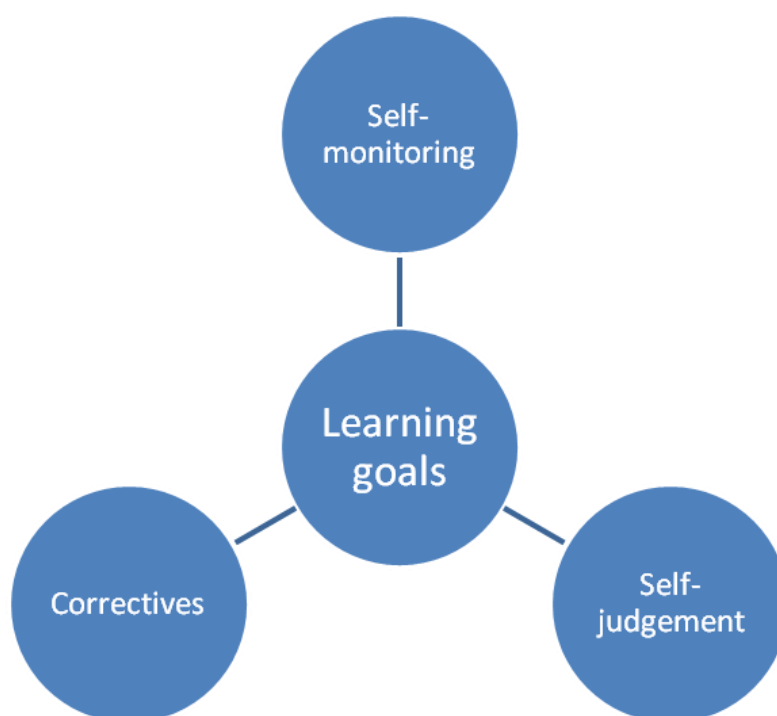


Figure 2.1. Student self-assessment cycle

Clear learning goals should be established in order to help students understand what they are expected to learn and set their own targets. It has been proved that students demonstrate better results when they establish specific individual goals [221; 252] which helps readers to be selective in reading an article and critically analyse the content [176, p. 474; 209]. Specific goals set by the reader may serve as criteria to monitor and evaluate the progress. There is evidence [206] that proficient readers can set very specific goals and shift them flexibly during reading whereas poor readers are not likely to establish specific goals properly and are sure to be unable to adjust goals during the reading process. Finally, reading the same text different readers may set different specific goals depending on their experience, subject knowledge, level of proficiency etc.

The fourth-year students are expected to have a sufficient level of reading proficiency and enough experience to be able to set specific goals providing that they are aware of general goals.

Goals are closely connected with motivation, attitudes towards reading and the social context when reading occurs. In academic settings especially with proficient readers goal setting becomes a conscious awareness [122, p. 51]. There have been numerous research which prove that goal setting has a powerful influence on comprehension both in the first and second languages [136; 163; 164; 201].

It is recommended that the teacher should encourage students' goal setting by demonstrating how to do it, asking students to present their specific goals, discuss them, analyse how their goals change during reading and at the end of reading, whether, in their opinion, they achieved the goals set and if not, why and how they can be attained in future.

Self-monitoring concerns what students are doing, often in relation to external standards (e.g., which strategy use, which techniques employ, what sources adopt). Self-evaluation focuses on identifying progress in comparison with targeted performance and thus gives students an idea of what they know or can do and what is still needed to be learnt and done [76]. Then students have to decide on instructional correctives which may lead to the achievement of the desired results. The correctives may relate to the current tasks or to the future assignments.

The effectiveness of the self-assessment cycle much depends on the teacher's ability to prepare students for it by demonstrating main techniques, discussing and analyzing them in the classroom, comparing the results of self-assessment with teacher's assessment, regular feedback, analysing possible correctives and their effectiveness with students. Students can be provided with self-assessment checklist at the end of the module to analyse the process and the results. A fragment of self-assessment checklist, which was offered to students during the experimental study, is presented in Table 2.2.

Table 2.2

Self assessment checklist (a fragment)

Skills	Grades (from 1 till 5)
I can access the meanings of a large number of words automatically	
I can infer meaning from phrase- and clause-level grammatical information	
I can anticipate grammatical and semantic categories used	
I can identify the topic, contents and significance of academic texts (articles, theses, reports etc.) and decide whether the text is worth reading more in detail	
I can find the necessary information in academic texts	
I can select and understand evaluative judgements in academic texts	
I can assess the importance of the information	
I can understand the gist and main details of academic texts (articles, theses, reports etc.)	
I can define quickly the contents and expediency of a more detailed reading of academic texts	
I can integrate text information with existing schematic knowledge	
I can understand argument in an academic text	
I can synthesize information from various sources	
I can analyse graphs, charts etc. effectively	
I can select effective reading and study strategies and techniques	
I can analyse my own learning style and always do it.	
I can reflect on the effectiveness of my own reading process and always do it.	

Filling the checklist students have to analyse how good they are at academic reading and what their individual goals may be.

The system of exercises and tasks, described in the previous section, complexes of exercises and tasks developed within the system as well as all the learning materials selected and developed are the *learning aids*.

As the model functions within the module system, it is necessary to define how many class hours and self-study hours should be allocated to reach the determined purposes.

As the experiment was held among the fourth-year philology students at Taras Shevchenko National University of Kyiv we focused on the syllabus for Practical English.

According to the syllabus the total amount of class hours is 66 for the first semester and 74 for the second, self-study hours – 106 for the first and 108 for the second semester. We assumed that the amount of hours can be equally divided between the four skills – reading, writing, listening and speaking. 25 % of study time can be dedicated to reading. However, academic reading cannot occupy all the time as student will have to read different types of texts. Having analysed the requirements of the syllabus and the results of the survey conducted among the fourth-year philology students at Taras Shevchenko National University of Kyiv which proved our assumption about advisability of teaching them academic reading (86 % of respondents expressed desire to read academic texts – see Appendix B), we decided to dedicate 50 % of reading time to academic texts. As a result, approximately 8 class hours and 13 self-study hours can be allocated to academic reading in the first semester (4 class hours and 6,5 self-study hours to each of the two modules). As for self-study, students who need can work more at their home assignments as self-study time cannot be strictly limited.

In our model there is a correspondence between the modules and the cycles. Though types of exercises and tasks may repeat in each cycle/module, the materials differ.

Three class hours are allocated to pre-test and final test. The pre-test is conducted at the beginning of the study to check students' level of English academic reading competence with the help of the tests for assessing comprehension of the gist, a detail, locating and understanding specific information, information analysis and integration. The tests will be described and presented in Chapter 3. At the end of the semester the final test is used with the aim of assessing students' progress (in our case it was a post-test).

As self-study assignments students are supposed to do some exercises, read texts, analyse them. The results are checked by the teacher or students themselves with the help of the keys. Besides, students are provided with additional academic texts and assignments which they can do on their own if they wish to improve their skills and demonstrate better results at the final test. The types of the exercises and tasks are the same as in § 2.2.

The model is presented in table 2.3.

Though not shown in the model (table 2.3), on account of class hours limit after each module there can be a test aimed at measuring students' achievements, determining the gaps, motivating students to develop skills and directing them in their further study. Besides, after two cycles the exercises on analyzing structural and linguistic features of academic discourse (preparatory stage) become of less importance and can be either omitted or done as a home assignment (if the teacher or the students themselves decide that they still need to do them). It is recommended that the exercises on building strategic awareness (preparatory stage) should also be done at home. Thus more class hours can be dedicated to students' analysis and discussion of the information and the obtained results.

Table 2.3

Model of teaching reading English academic texts to philology students

Module	Stage	Class hours	Self-study	Purposes	Content	Group of exercises
	Pre-test	1.5		Assessing students' level of English academic reading competence	Tests for assessing comprehension of the gist, a detail, locating and understanding specific information, information analysis and integration	
1	Preparatory	0,5	1	Promoting students understanding of features of academic discourse and building strategic awareness.	Exercises and tasks on analyzing structural and linguistic features of academic discourse, building strategic awareness.	1.1–1.3
		Pre-reading stage		Activating students' background and subject knowledge, developing lexical, grammatical, prognostic skills	Exercises and tasks on activating subject knowledge, developing prognostic, lexical, grammatical skills.	2.1–2.4
	Realization	0,5	1.1			
		While-reading stage		Developing reading comprehension and study skills	Exercises and tasks on developing study skills, forming academic reading comprehension skills: skimming, scanning, reading for a detail.	2.5–2.8
		0,5	2			
		Post-reading stage		Developing academic reading comprehension skills, critical reading and study skills	Exercises and tasks on improving study skills, developing academic reading comprehension skills, critical reading skills.	2.9–2.11
		0,5	1.2			

Продовження таблиці 2.3

	Integrative	0,5	1.2	Developing abilities to use the information from the text and integrate information from different sources	Exercises and tasks on developing abilities to integrate information from different sources and use the information from the text.	3.1–3.2
2	As in Module 1					
Final test	1.5			Assessing students' level of English academic reading competence	Tests for assessing comprehension of the gist, a detail, locating and understanding specific information, information analysis and integration	
Total	8	13				

The suggested model of teaching reading English academic texts to philology students is relevant to the principles of teaching, presupposes coherence, unity, interconnection dependencies of its components, consistency, considers peculiarities of the module system. The model has been built with account to the object (the process of teaching reading English academic texts to philology students), purpose (determining the succession of teacher's action aimed at developing academic reading comprehension skills), subjects (the fourth-year future philologists), expected results (ability to understand the gist and details of academic texts, analyse them critically adjusting the type of reading and the strategies used to the purpose), the university subject/subjects the model represents (Practical English integrated with other subjects), learning aids (the suggested system of exercises and tasks, complexes of exercises and tasks developed within the system as well as all the learning materials selected and developed), assessment of the achievements (formative which includes regular self-assessment, module assessment, final assessment).

Conclusions to chapter 2

On the basis of the analysis of 47 articles from recognized scientific journals (*Journal of English Linguistics*, *International Journal of English Studies*, *ELT Journal*) the main features of academic texts which students should be aware of to better comprehend research articles have been determined: impersonality, objectivity, neutrality, rationality, stringency, economy, content objectivity, descriptivity, accuracy, uniformity, clarity, precision, unambiguity, intertextuality and referentiality, use of unified terminology, avoidance of emotional and expressive elements, carefully and logically organised structure, use of long sentences loaded with content words, attitudinal adverbs, premodifiers and frequent nominalization, use of discourse linkers which contribute to the reader's orientation in the text and its interpretations.

Taking into account academic text features as well as curriculum requirements, we have presented and substantiated the criteria for text selection: authenticity, motivating potential, relevance to course topics, content and linguistic accessibility, informational value, scientific novelty, stimulating effect for further activities, length.

Teaching philology students English academic reading should be based on the following principles: motivational learning, mastering the linguistic and subject knowledge and skills in a cyclical manner, development of students' academic reading as an integrated skill, profession-oriented learning, correspondence to the students' level of subject knowledge and language proficiency.

The following stages of teaching philology students English academic reading have been determined: preparatory stage aimed at promoting students understanding of structural and linguistic features of academic discourse and developing their strategic awareness; realization stage which is connected with reading a text and consists of sub-stages (pre-reading directed to activating students' background and subject knowledge, developing lexical, grammatical, prognostic skills; while-reading aimed at developing reading comprehension as well as study skills; post-reading designed to

improve reading comprehension skills and study skills, develop critical reading skills); integrative stage aimed at developing abilities to use the information from the text and integrate information from different sources.

The suggested system of exercises and tasks for teaching reading English academic texts to philology students consists of three subsystems which correlate with the stages and include groups of exercises and tasks: *subsystem 1* (G 1.1. Promoting students understanding of structural features of academic discourse; G 1.2. Promoting students understanding of linguistic features of academic discourse; G 1.3. Building strategic awareness); *subsystem 2* (pre-reading: G 2.1. Activating subject knowledge; G 2.2 Developing prognostic skills; G 2.3. Developing lexical skills; G 2.4. Developing grammatical skills; while-reading: G 2.5. Developing study skills; G 2.6. Forming academic reading comprehension skills: skimming; G 2.7. Forming academic reading comprehension skills: scanning; G 2.8. Forming academic reading comprehension skills: reading for a detail; post-reading: G 2.9. The improvement of study skills; G 2.10. Developing academic reading comprehension skills; G 2.11. Developing critical reading skills); *subsystem 3* (G 3.1. Developing abilities to integrate information from different sources; G 3.2. Developing abilities to use the information from the text).

The suggested system has been developed in compliance with the factors facilitating the development of academic reading competence grounded in Chapter 1. The main characteristic features of the system are as follows: 1) all the exercises and tasks are motivated which means that the instructions contain explanation why the exercise should be done; 2) most exercises and tasks comprise a reflective component which will encourage students self-reflection and develop corresponding skills; 3) the purposes of the exercises and tasks are clearly stated and focused on with the aim of motivating students and helping them to set individual goals, 4) much attention is paid to activating and increasing subject knowledge before reading an article, 5) strategy development is focused on at every stage; 6) teacher control is combined with self-control which promotes students' autonomy; 7) academic reading skills are developed in integration with speaking and writing skills; 8) the majority of exercises presuppose

problem solving; 9) there is a combination of individual activities with pair and group work.

The suggested model of teaching philology students English academic reading is relevant to the principles of teaching, presupposes coherence, unity, interconnection dependencies of its components, consistency, considers peculiarities of the module system. The model has been built with account to the object (the process of teaching philology students English academic reading), purpose (determining the succession of teacher's action aimed at developing academic reading comprehension skills), subjects (the fourth-year future philologists), expected results (ability to understand the gist and details of academic texts, analyse them critically adjusting the type of reading and the strategies used to the purpose), the university subject/subjects the model represents (Practical English integrated with other subjects), learning aids (the suggested system of exercises and tasks, complexes of exercises and tasks developed within the system as well as all the learning materials selected and developed), assessment of the achievements (formative which includes regular self-assessment, module assessment, final assessment).

Self-assessment is described as a cyclical and ongoing process which consists of the following components: learning goals, self-monitoring, self-evaluation, selection and implementation of necessary correctives if needed.

The basic concepts of the chapter are presented in publications [45; 49].

CHAPTER 3

EXPERIMENTAL VERIFICATION OF THE EFFECTIVENESS OF THE METHODOLOGY OF TEACHING READING ENGLISH ACADEMIC TEXTS TO PHILOLOGY STUDENTS

In the previous chapter the methodology of teaching reading English academic texts to philology students, which includes criteria selection, gradual development of relevant skills on the basis of the suggested system of exercises and tasks and the model of teaching reading English academic texts to the fourth-year philology students, has been presented.

The next task is to verify the effectiveness of the suggested methodology experimentally, analyse the results and develop methodological recommendations on teaching reading English academic texts to philology students.

3.1. Organization of the experimental study

The purpose of the chapter is to present and analyze the results of the experimental verification of the suggested methodology of teaching reading English academic texts to philology students.

The experimental study was conducted in September-November 2014–2015 among 59 fourth-year philology students at Taras Shevchenko National University of Kyiv.

According to the requirements [10; 38] the experiment included the following stages:

- developing experimental materials;
- developing assessment criteria for English academic reading comprehension;
- experimental groups design;
- conducting pre-tests;
- verification of the experimental groups equality;

- experimental study;
- conducting post- tests;
- data processing, analysis of the results and their interpretation.

Before conducting the experiment it is necessary to formulate a hypothesis. To develop the hypothesis we took into account:

- theoretical foundations of the research (integrated approach in teaching academic reading (reading articles from a range of linguistic disciplines, integrating academic reading skills with speaking and writing); purposeful development of reading skills, comprehension skills, research and study skills; employment of different types of reading; focus on lexical skills development and intensive practice through both extensive and intensive reading; developing a strategic reader; first language strategies transfer);
- academic text characteristics (impersonality, objectivity, neutrality, rationality, content objectivity, descriptivity, accuracy, uniformity, clarity, precision, unambiguity, intertextuality and referentiality, use of unified terminology, avoidance of emotional and expressive elements, carefully and logically organised structure, use of long composite sentences loaded with content words, attitudinal adverbs, frequent nominalization etc., employment of discourse linkers which contribute to the reader's orientation in the text and its interpretations);
- curriculum requirements;
- purposes of academic reading (to learn from texts, to integrate information etc.)

As a result we put forward the following *hypothesis*: teaching English academic reading to undergraduates of philology to achieve an adequate level of comprehension should be carried out with the help of the suggested methodology which presupposes:

1) three stages of developing expertise in reading comprehension (preparatory aimed at promoting students understanding of structural and linguistic features of academic discourse and developing strategic awareness, realization (pre-reading – activating background knowledge; developing lexical, grammatical, prognostic skills;

while-reading – developing reading comprehension as well as study skills, post-reading – improving critical reading skills, study skills, developing reading comprehension skills), integrative – developing abilities to use the information from the text and integrate information from different sources);

2) a system of exercises and tasks which correlates with the stages and includes groups of exercises and tasks developed on the basis of academic texts selected according to the determined criteria (authenticity, motivating potential, relevance to course topics, content and linguistic accessibility, informational value, scientific novelty, stimulating effect for further activities, text length);

3) a cyclical model of teaching reading English academic texts to philology students.

The purpose of the experiment was: 1) to verify the effectiveness of the suggested methodology of teaching reading English academic texts to philology students, efficacy of the elaborated system of exercises and tasks; 2) to determine a more effective model of the two suggested.

To achieve the objective the following tasks have been set:

1) to develop assessment criteria for English academic reading comprehension;

2) to conduct a pre-test to assess the students level of English academic reading competence;

3) to carry out the experimental study on the basis of the suggested materials;

4) to conduct a post-test to assess the students level of English academic reading competence and compare it with the results of the pre-test;

5) to check the validity of the results with the help of the methods of mathematical statistics;

6) to compare the results of pre- and post-tests in experimental groups;

7) to compare the post-test results in experimental groups which used models A and B;

8) to analyze, interpret and report the results.

The independent variable (a variable we changed as, in our opinion, it had a direct effect on the results of the study) was the correlation between class and home activities at the preparatory stage.

The constants in the experiment were the following: learning objectives; learning environment; the duration of the study; program requirements; the experimental groups and the number of students in the groups; the level of students' English academic reading competence in the groups before the experiment; the amount of classes and self-study hours; teaching materials; pre-tests and post-tests; assessment criteria for English academic reading competence.

The conducted experiment was *educational* as it focused on the development of philology students English academic reading competence; *natural* as it was conducted in students' typical learning environment without any selection of participants, *vertical* because during the experiment we had to evaluate the efficiency of the developed methodology of teaching reading English academic texts to philology students by comparing the level of reading competence before the experiment and after it; *horizontal* as we also had to compare the effectiveness of the two suggested models. According to the *model A* students get acquainted with the most useful cognitive, metacognitive, compensation strategies, discussed and practised them during the classes and then used them doing home tasks. Besides, at the first (preparatory) stage, which is aimed at familiarizing students with structural and linguistic features of academic discourse and developing their strategic awareness, a heuristic conversation was employed during the classes to stir up students' curiosity and help them understand the main characteristics of the research articles to better comprehend them. Students did a part of exercises, which developed their awareness of academic discourse as well as their strategic awareness, in classes and a part as a home assignment. In the *model B* students were just provided with all the necessary information about the effective strategies and the important research article features and recommended to use the information to do suggested home tasks.

The next step of the research was to determine the assessment criteria for English academic reading competence. A perfect assessment of academic reading comprehension, in our opinion, should meet the following requirements:

- an assessment tool should be guided by the goal of the assessment [167, p. 113];
- both the examiner and the students ought to understand the purpose which assessment is meant to serve;
- the instruments used should be valid and objective;
- the system of assessment must be as clear as possible (both to the examiner and the students);
- the outcome measures should be reliable and useful to the assessed;
- the assessment experience should be useful to both examiners and those assessed [130, p. 110];
- assessment ought to reflect reader's ability not to discover meaning, but to produce it: to dismantle the text and rebuild it in his own way [131, p. 7] using the previous knowledge, experience, purpose etc.;
- the assessment criteria should be clear to the examiner and students;
- both the students and the examiner must be aware of the purpose of each task;
- the assessment should demonstrate the gaps which students have to overcome.

Though academic texts can be quite challenging in terms of vocabulary, we can assume that reading comprehension of the fourth-year students are more closely related to higher level skills (for example, coordination of main and supporting ideas of the text, making textbased or situation-based inferences, interpreting the information from the text, monitoring and managing comprehension processes [167, p. 111]. As a result, assessing high-level skills seems particularly appropriate for academic reading.

The analysis of modern literature [5, c. 27; 17; 20, p. 143-154; 28; 37] as well as the reading test formats of internationally recognized exams (The International English

Language Testing System – IELTS, tests for the Cambridge Certificate of Advanced English – CAE and Certificate of Proficiency in English – CPE, Test of English as a Foreign Language – TOEFL), which contain academic texts or at least passages in formal written English, shows that usually assessment is focused on the comprehension of the gist, detail, opinion, text structure and organization, global meaning, locating specific information, drawing conclusions on the information from the passage.

Taking into account the purpose of reading in academic settings (to search for information, learn from text, integrate information from different sources, analyze and critique text, write, search for information needed for writing) we have drawn the conclusion that the assessment should focus on understanding the gist, detail, locating and understanding specific information, critiquing and analyzing the text, integrating information from different articles. We have developed the following assessment criteria for English academic reading comprehension:

- comprehension of the gist;
- comprehension of a detail;
- locating and understanding specific information;
- ability to analyze the information;
- capacity to integrate information.

The next step was to define the type of tasks to check students reading comprehension according to each of the mentioned criterion.

The analysis of test formats of internationally recognized exams (IELTS, CAE, CPE, TOEFL) showed that usually a variety of question types is used: gapped texts, multiple choice, short answer questions, sentence completion, classification, matching, choosing a suitable paragraph heading from the list, identification of writer's ideas or information from the text (true/false/not given) etc.

Table 3.1, which is a summary of the analysis of the above mentioned international tests, the purpose of reading in academic settings and academic texts features, demonstrates the correlation between academic reading comprehension criteria and the question types.

Table 3.1

**Correlation between academic reading comprehension
criteria and the question types**

Criteria	Question types
comprehension of the gist	True-False questions, multiple choice,
comprehension of a detail	multiple choice, short answer questions, filling gaps
locating and understanding specific information	multiple matching, filling gaps, short answer questions, multiple choice
information analysis	multiple choice, open questions, identification of writer's ideas or information from the text (true/false/not given)
information integration	open questions

To assess the first criterion (comprehension of the gist) we used True-False questions which are relatively easy to compose and score, but should be clear of ambiguity.

Comprehension of a detail was checked with the help of multiple choice questions which are among the most common for reading comprehension [167, p. 113]. They may be *local textbase questions* (students have to consider only one or two adjacent sentences to answer the question) which include searching and locating the explicit content in a sentence with minimal inference and deciding which answer best matches the text content; *global-textbase questions* which reflect the thematic meaning or generalization of a longer segment of the text (several sentences, paragraph) or the whole text and include searching and locating the appropriate segments of the texts, summarization the segment, and then assessing the best option; *inference questions* associated with generating inferences from the texts (bridging, explanatory, predictive, or elaborative) [167, p. 117–119]. Inference questions are the most difficult because they “require the reader to reason beyond the explicit text” [167, p. 119] though their difficulty depends on how much the text supports the inference. In evaluating students comprehension of a detail local textbase questions and especially global-textbase questions dominated as, in our opinion, inference questions are more appropriate to assess the ability to analyze the information. Elaborating the multiple choice questions

we took into account the following considerations: 1) the design of incorrect choices is challenging as they may put into students' heads ideas which they did not have before they read them [130, p. 321]; 2) the difficulty of the questions is to a great extent determined by the similarity of the alternative answers to the correct one [167, p. 119]; 3) there should be only one correct answer of the four choices.

The ability to locate and understand specific information was checked with the help of short answer questions which, in our view, are relatively easy to compose and score and demonstrate students comprehension of specific information and ability to find it in the text.

To assess the ability to analyze the information and integrate information from different sources open questions were employed which enabled students to demonstrate their understanding of the problem in general and ability to logically combine information.

To evaluate students pre-test (as well as post-test) performance they were offered 4 texts (each of which was a part of an article limited to approximately 700–900 words per text). The questions aimed at assessing ability to integrate information were based on the four texts.

For each correct answer in tasks 1–3 students were awarded 1 score with maximum 10 scores for each task. In task 4 each correct answer received 2 scores, partially correct – 1 score (maximum – 20 scores). The scoring for task 5 is shown in Table 3.2.

Table 3.2

Integrative Task (Task 5) Scoring

Scores	Criteria
1	Incomplete answer with more than 4 mistakes.
2	Answer with 3-4 mistakes and some arguments.
3	Answer with 1-2 minor mistakes, some arguments and examples which are not sufficient.
4	Complete and correct answer with reasonable arguments and relevant examples.

Pre-test and post-test scoring is shown in Table 3.3.

Table 3.3

Pre-test and post-test scoring

№ of the task	Criteria	Type of questions	Max. scores	Scoring for each correct answer
Task 1	comprehension of the gist	True-False questions	10	1 for each correct answer
Task 2	comprehension of a detail	multiple choice questions	10	1 for each correct answer
Task 3	locating and understanding specific information	short answer questions	10	1 for each correct answer
Task 4	information analysis	open questions	20	2 for each correct answer
Task 5	information integration	open questions	20	4 for each correct answer
Total			70	

Students' pre-test performance was assessed with the help of the following tasks.

Task 1.

Purpose: *to assess students' ability to comprehend the gist.*

Instruction: *Read the fragment of the article by Mieder W. "'We Are All in the Same Boat Now' Proverbial Rhetoric in the Churchill-Roosevelt Correspondence" [264]. Answer the following True/False questions:*

1. *Both F. Roosevelt and W. Churchill served in Navy. T/F*
2. *There is much research on F. Roosevelt's proverbs or proverbial expressions. T/F*
3. *The two politicians recognized the important role of the navy. T/F*
4. *F. Roosevelt was elected the President 4 times. T/F*

5. *If the two leaders had not been native speakers, they would not have been able to communicate complicated matters in vivid and easily recognizable imagery.* T/F

6. *Somatic phrases were used to include a human element into stressful questions the two politicians discussed.* T/F

7. *W. Churchill was more eager to use proverbial expressions than F. Roosevelt.* T/F

8. *The politicians changed the proverbial expressions with the aim of manipulative diplomacy.* T/F

9. *They considered Charles de Gaulle to be a reliable partner.* T/F

10. *F. Roosevelt was much better at verbal play than W. Churchill.* T/F

Key: 1. T, 2. F, 3. T, 4. T, 5. T, 6. T, 7. F, 8. T, 9. F, 10. F.

The fragment of the article is presented in Appendix D (text 1).

Task 2.

Purpose: *to assess students' ability to comprehend a detail.*

Instruction: *Read the fragment of the article Langlotz A. "Occasional Adnominal Idiom Modification – A Cognitive Linguistic Approach" [260]. Answer the following multiple choice questions:*

1. *What is fixedness of an idiom?*
 - a) *its restricted syntagmatic variability;*
 - b) *its fixed position in a sentence;*
 - c) *its fixed grammatical form;*
 - d) *its limited use.*
2. *The author supports the view that:*
 - a) *semantic structure of idioms cannot be analysed and decomposed;*
 - b) *all idioms have an analysable or decomposable semantic structure;*
 - c) *some idioms have an analysable or decomposable semantic structure;*
 - d) *semantic structure of idioms depends on the context.*

3. *Ernst supported the view that:*
 - a) *any paraphrase will adequately represent the internal structure of an idiom;*
 - b) *idioms do not even have internal structure;*
 - c) *have fixed, monolithic meanings;*
 - d) *not all idioms have monolithic meanings.*
4. *According to Schenk:*
 - a) *all idioms are non-decomposable semantic units*
 - b) *idioms are motivated through their constituents*
 - c) *some parts of idioms can be modified;*
 - d) *the concept of analysability can be applied to idioms.*
5. *In the article the author DOES NOT relate to:*
 - a) *external modification;*
 - b) *internal modification;*
 - c) *conjunction modification;*
 - d) *both internal and conjunction modification.*
6. *The writer supports the view that*
 - a) *idiomatic base-form cannot be adapted to the context of use through modifications;*
 - b) *idiomatic modifications is merely a wordplay;*
 - c) *idiomatic base-form can never be modified;*
 - d) *idiomatic base-form can be adapted to the context of use through modifications.*
7. *According to the writer, external modification can also apply to non-analysable idioms, i.e. idioms that have the status of semantic units because:*
 - a) *premodifying adjective modifies the idiom as a whole;*
 - b) *premodifying adjective elaborates the head-noun;*
 - c) *premodifying adjective does not modify the idiom as a whole.*
 - d) *external modification directly depends on the internal semantic structure of the idiom.*

8. The following modification “Carter does not have an economic leg to stand on (original) → Carter does not have a political leg to stand on” (modification) is an example of:

- a) external modification;
- b) internal modification;
- c) conjunction modification;
- d) both internal and conjunction modification.

9. In the sentence “I spilled the nice brown beans that my aunt brought me from Spain” one can find an example of:

- a) external modification;
- b) internal modification;
- c) both internal and conjunction modification;
- d) the literal meaning.

10. The sentence “Too many political cooks spoil the economic broth” is an example of:

- a) external modification;
- b) both internal and external modification;
- c) the literal meaning;
- d) internal modification.

Key: 1. A, 2. C, 3. D, 4. A, 5. C, 6. D, 7. A, 8. B, 9. B, 10. D.

The fragment of the article is presented in Appendix D (text 2).

Task 3.

Purpose: to assess students’ ability to locate and understand specific information.

Instruction: Read the fragment of the article by Feyaerts K. “Towards a Dynamic Account of Phraseological Meaning: Creative Variation in Headlines and Conversational Humour” [255] and answer the following questions or continue the sentence using no more than three words.

1. According to Cognitive Linguistics the meaning of phraseological units emerge from the interaction between the profile and
2. What is the main feature of any kind of fixed expressions in traditional view?
3. Which principle states that an expression's overall meaning (partially) results from the components' meaning?
4. On which level of linguistic and conceptual organization can motivational links with a fixed expression's overall meaning be established?
5. Which notion is motivation often confused with?
6. According to Cognitive Linguistics is there any strict boundary between linguistic and contextual information?
7. What is the goal of headlines according to Dor?
8. What newspaper was used to collect the headlines?
9. How long did the survey last?
10. Do motivational link and analyzability always coincide?

Key: 1. base of an expression, 2. semantic stability, 3. compositionality, 4. on any level, 5. grounding, 6. No, 7. to optimise the relevance of the stories for the readers, 8. the Financial Times, 9. A week, 10. No.

The fragment of the article is presented in Appendix D (text 3).

Task 4.

Purpose: to assess students' ability to analyse information.

Instruction: Read the fragment of the article by Gabrielatos C. "Fleeing, Sneaking, Flooding A Corpus Analysis of Discursive Constructions of Refugees and Asylum Seekers in the UK Press, 1996-2005". Answer the following open questions with your own words:

1. Has there been made enough research on the problem?
2. What was the term "negative misinformation" used for?
3. Why does the author use two approaches to analyse discursive constructions of refugees and asylum seekers in the UK press.

4. *Why did the author choose newspapers to examine the construction of refugees and asylum seekers?*
5. *What notions does the author focus on in the article?*
6. *What does topoi mean?*
7. *What is semantic preference?*
8. *Why did the author set the threshold for keyness?*
9. *What attitudes are expressed in collocations Eastern Europe, Eastern Europeans?*
10. *How do broadsheets and tabloids keywords differ?*

The fragment of the article is presented in Appendix D (text 4).

Task 5.

Purpose: *to assess students' ability to integrate information.*

Instruction: *Answer the following questions integrating information from the previous four texts:*

1. *Are idioms always fully fixed? Prove your answer with the help of examples.*
2. *What is motivation and analysability in terms of fixed expressions?*
3. *What is Corpus Linguistics?*
4. *What is Cognitive Linguistics?*
5. *What are the reasons of phraseological units modification?*

The post-test tasks were of the same type as pre-test.

In this section we have described the organization of the experimental study, substantiated criteria to assess English academic reading competence, suggested question types which correlate with each criterion and presented pre-test tasks.

3.2. The analysis of the results of the experiment and their interpretation

During the experiment we obtained the results which need to be analysed and interpreted.

The level of English academic reading competence of the fourth-year students before the experiment was assessed with the help of the tasks presented in the previous section.

Using the formula $K=Q/N$, where Q is the amount of scores, a N – maximum scores, we calculated students' learning coefficient. The level is considered sufficient if student's learning coefficient is not less than 0,7 [3, p. 52-69].

The results of students' pre-test performance are presented in Appendix G (Tables G 1, G 2), post-test performance – Appendix G (Tables G 3, G 4).

The generalized assessment results in both groups are shown in table 3.4.

Table 3.4

Assessment results (pre-tests/ post-tests)

Experimental group	Learning coefficient		Increase
	Pre-test	Post-test	
EG-1	0,55	0,81	0,26
EG-2	0,56	0,77	0,21

The pre-test results (see Table 3.5) showed a low level of students academic reading competence as neither EG–1 nor EG–2 demonstrated the sufficient learning coefficient. Moreover, students exposed low results by all the criteria.

Though the pre-test results showed the equality of the two experimental groups before the experiment, to check the reliability of the obtained results Fisher's angular transformation was used [30, p. 158–159].

We formulated two hypotheses – null (H_0), which states that there are no differences between the groups and alternative (H_1) which states that the groups differ.

H_0 : The level of students English academic reading competence in EG–1 is equal to that of EG–2.

H_1 : The level of students English academic reading competence in EG–1 is lower than that of EG–2.

Table 3.5

Criterion referenced pre-test results

Experimental group	Criteria					Scores	Learning coefficients
	comprehension of the gist	comprehension of a detail	locating and understanding specific information	information analysis	information integration		
EG-1	5,9	5,8	5,6	11	10,4	38,7	0,55
EG-2	6,4	6	6,1	10,5	10,5	39,5	0,56
Max. scores	10	10	10	20	20	70	1

Table 3.6 demonstrates the results of the comparison of EG–1 and EG–2 pre-test performance [30, p. 330–332].

Table 3.6

Comparison of EG–1 and EG–2 pre-test performance

Experimental group	«There is effect»		ϕ	«No effect»		ϕ	Total number of students
	Number of students	Percentage		Number of students	Percentage		
EG–1	4	13,8 %	0,761	25	86,2 %	2,380	29
EG–2	3	10 %	0,644	27	90 %	2,498	30
Total number of students	7			52			59

$\varphi^*_{emp.}$ is calculated with the formula: $\varphi^* = (\varphi_1 - \varphi_2) \cdot \sqrt{\frac{n_1 \cdot n_2}{n_1 + n_2}}$, where

$$\varphi_1 (13,8 \%) = 0,761$$

$$\varphi_2 (10 \%) = 0,644 [30, \text{ p. } 330]$$

n_1 – the amount of students in EG–1 (in our case – 29);

n_2 – the amount of students in EG–2 (in our case – 30).

$$\varphi^*_{emp.} = (0,761 - 0,644) \cdot \sqrt{870/59} = 0,449.$$

$$\varphi^*_{cr.} \begin{cases} 1,64(p \leq 0,05) \\ 2,31(p \leq 0,01) \end{cases}$$

$$\varphi^*_{emp.} < \varphi^*_{cr.}$$

Figure 3.1 illustrates that $\varphi^*_{emp.}$ is insignificant.

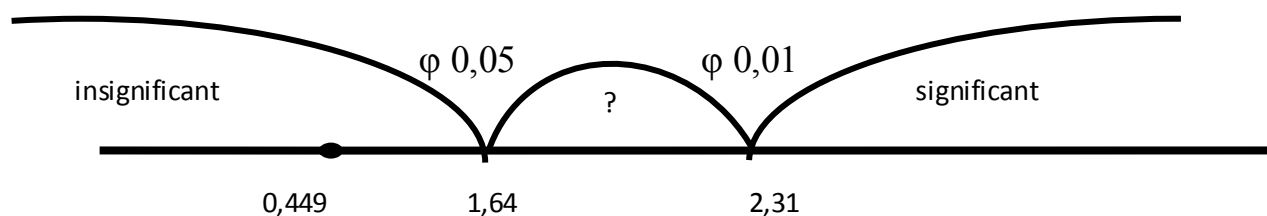


Figure. 3.1. Correlation between $\varphi^*_{emp.}$ and $\varphi^*_{cr.}$

As $\varphi^*_{emp.} < \varphi^*_{cr.}$, we assume H_0 hypothesis: the level of students English academic reading competence in EG–1 is equal to that of EG–2.

The results of the pre-test showed that the open questions which were developed to assess information analysis and information integration abilities turned out to be the most difficult for students as they presupposed deep understanding of the text, the problems and ability to synthesize the information logically and coherently, give arguments and examples. Assessing this type of task we did not pay attention to grammatical, lexical errors etc., but focused on students comprehension of the problem and their ability to exemplify their summary and conclusions.

During the experimental study (which was held in the first semester and contained 8 class hours and 13 self-study hours) the suggested system of exercises and tasks was used in both experimental groups (EG): in EG 1 – model A, EG 2 – model B.

The post-test scores (see Table 3.7) showed that students made a significant progress, and both EG–1 and EG–2 demonstrated the sufficient learning coefficient by all the criteria. Besides, the results showed that EG–1 students did tasks 2–5 better than EG–2 students.

Table 3.7

Criterion referenced post-test results

Experimental group	Criteria					Scores	Learning coefficients
	comprehension of the gist	comprehension of a detail	locating and understanding specific information	information analysis	information integration		
EG-1	8,8	8,3	8,5	15,7	15,5	56,8	0,81
EG-2	8,8	8,2	7,8	14,8	14,2	53,8	0,77
Max. scores	10	10	10	20	20	70	1

To check the reliability of the obtained results Fisher's angular transformation was used [30, p. 158–159].

At first it is necessary to compare EG–1 before and after the experiment to prove the effectiveness of Model A.

We formulated two hypotheses – null (H_0), which states that there are no differences between EG–1 before the experiment and after it and alternative (H_1) which states that the EG–1 before the experiment differs from EG–1 after it.

H_0 : The level of students English academic reading competence in EG–1 after the experiment is the same as before.

H_1 : The level of students English academic reading competence in EG–1 after the experiment is higher than before.

Table 3.8 demonstrates the results of the comparison of EG–1 before and after the experimental study [30, p. 330-332].

Table 3.8

Comparison of EG–1 pre-test and post-test performance

Experimental group	«There is effect»		φ	«No effect»		φ	Total number of students
	Number of students	Percentage		Number of students	Percentage		
EG–1 before the experiment	4	13,8 %	0,761	25	86,2 %	2,380	29
EG–1 after the experiment	28	96,6 %	2,771	1	3,4 %	0,371	29

Using the formula: $\varphi^* = (\varphi_1 - \varphi_2) \cdot \sqrt{\frac{n_1 \cdot n_2}{n_1 + n_2}}$, we obtained $\varphi^*_{emp.} = 7,654$.

$$\varphi^*_{cr.} \begin{cases} 1,64(p \leq 0,05) \\ 2,31(p \leq 0,01) \end{cases}$$

$$\varphi^*_{emp.} > \varphi^*_{cr.}$$

Figure 3.2 illustrates that $\varphi^*_{emp.}$ is significant.

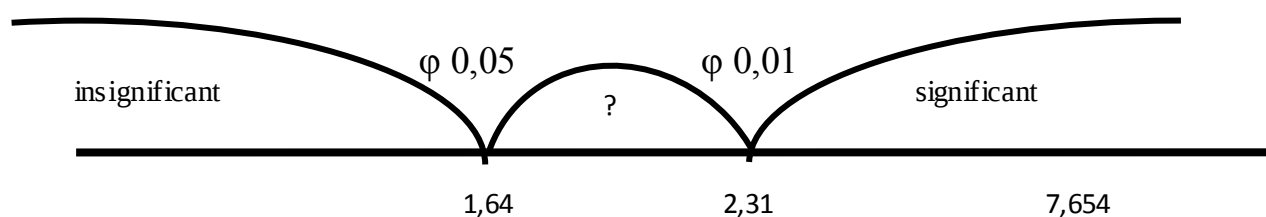


Figure. 3.2. Correlation between $\varphi^*_{emp.}$ and $\varphi^*_{cr.}$

As $\varphi^*_{emp.} > \varphi^*_{cr.}$, H_1 hypothesis is assumed: the level of students English academic reading competence in EG–1 after the experiment is higher than before. Thus, the results show the effectiveness of Model A.

The next step is to compare EG–2 before and after the experiment to check the effectiveness of Model B.

We formulated two hypotheses – null (H_0), which states that there are no differences between EG–2 before the experiment and after it and alternative (H_1) which states that EG–2 before the experiment differs from EG–2 after it.

H_0 : The level of students English academic reading competence in EG–2 after the experiment is the same as before.

H_1 : The level of students English academic reading competence in EG–2 after the experiment is higher than before.

Table 3.9 demonstrates the results of the comparison of EG–2 before and after the experimental study [30, p. 330-332].

Table 3.9

Comparison of EG–2 pre-test and post-test performance

Experimental group	«There is effect»		φ	«No effect»		φ	Total number of students
	Number of students	Percentage		Number of students	Percentage		
EG–2 before the experiment	3	10 %	0,644	27	90 %	2,498	30
EG–2 after the experiment	23	76,7 %	2,134	7	23,3 %	1,007	30

Using the formula: $\varphi^* = (\varphi_1 - \varphi_2) \cdot \sqrt{\frac{n_1 \cdot n_2}{n_1 + n_2}}$, we obtained $\varphi^*_{emp.} = 5,771$.

$\varphi^*_{emp.} > \varphi^*_{cr.}$ (see figures 3.1, 3.2).

As $\varphi^*_{emp.} > \varphi^*_{cr.}$, H_1 hypothesis is assumed: the level of students English academic reading competence in EG–2 after the experiment is higher than before which proves the effectiveness of Model B.

The next step is to compare the post-test performance in EG–1 and EG–2 which also means the comparison of the two models – model A and model B with the aim of determining a more effective one.

As almost all students in EG–1 and EG–2 demonstrated the sufficient learning coefficient (almost all reached 0,7) the threshold level was shifted to 0,8. We formulated two hypotheses – null (H_0), which states that there are no differences between the groups and alternative (H_1) which states that the groups differ.

H_0 : The level of students English academic reading competence in EG–1 is equal to that in EG–2.

H_1 : The level of students English academic reading competence in EG–1 is higher than that in EG–2.

Table 3.10 shows the results of the comparison of EG–1 and EG–2 post-test performance [30, p. 330-332].

Table 3.10

Comparison of EG–1 and EG–2 post-test performance

Experimental group	«There is effect»		φ	«No effect»		φ	Total number of students
	Number of students	Percentage		Number of students	Percentage		
EG–1	22	75,9 %	2,115	7	24,1 %	1,026	29
EG–2	13	43,3 %	1,436	17	56,7 %	1,705	30
Total number of students	35			24			59

We obtained $\varphi^*_{emp.}$ 2,607.

As $\varphi^*_{emp.} > \varphi^*_{cr.}$, we assume H_1 hypothesis: the level of students English academic reading competence in EG–1 is higher than that of EG–2 which proves that model A is more effective then model B.

To prove the efficiency of model A another test – the Mann-Whitney U-test – was used.

At first it was necessary to rearrange the data from the lowest to highest beginning with 1 for the smallest value (in our case it is 44 from EG–2). If there is a tie, the ranks are averaged.

The ranks assigned to the the post-test results in EG–1 and EG–2 are presented in table 3.11.

The sum of all the ranks must be equal with the sum obtained from the formula $\sum(R_i) = \frac{N \times (N + 1)}{2}$, where N is the total number of observations [30, p. 42].

Using the formula $\sum(R_i) = \frac{N \times (N + 1)}{2}$, we obtained 1770. The sum of all the ranks: $1026,5 + 743,5 = 1770$. So both the sums are equal.

Table 3.11 shows that the post-test results were much better in EG–1 as the sum of its ranks (1026,5) is bigger than that in EG–2 (743,5).

Two hypotheses were formulated:

H_0 : The level of students English academic reading competence in EG–1 is equal to that in EG–2.

H_1 : The level of students English academic reading competence in EG–1 is higher than that in EG–2.

Table 3.11

The ranks assigned to the post-test results in EG–1 and EG–2

№	EG-1	Rank 1	EG-2	Rank 2
1	56	29.5	46	2.5
2	58	45	55	23
3	56	29.5	57	39
4	51	12	46	2.5
5	56	29.5	44	1
6	61	51	63	56.5
7	48	7	54	19.5
8	57	39	62	54.5
9	64	58.5	50	9
10	57	39	57	39
11	63	56.5	55	23
12	58	45	57	39
13	51	12	56	29.5
14	53	16.5	56	29.5
15	51	12	48	7
16	56	29.5	57	39
17	61	51	56	29.5
18	57	39	55	23
19	61	51	48	7
20	58	45	59	47.5
21	59	47.5	51	12
22	56	29.5	57	39
23	56	29.5	47	4.5
24	57	39	56	29.5
25	52	15	53	16.5
26	62	54.5	54	19.5
27	61	51	64	58.5
28	61	51	54	19.5
29	51	12	54	19.5
30			47	4.5
Total:		1026.5		743.5

U_{emn} was given by $U = n_1 \times n_2 + \frac{n_x \times (n_x + 1)}{2} - T_x$, where

n_1 – number of students in EG–1

n_2 – number of students in EG–2

T_x – bigger of the two sums of the ranks

n_x – number of students in the group which has a bigger sum of the ranks

$$U_{emn} = 278,5.$$

To determine U-critical value Table II of Appendix 1 was used [30, c. 316-319] ($n_1=29, n_2=30$).

$$U_{cr.} = \begin{cases} 326 (p \leq 0,05) \\ 281 (p \leq 0,01) \end{cases}$$

Figure 3.3 illustrates that $U_{emp.}$ is significant.

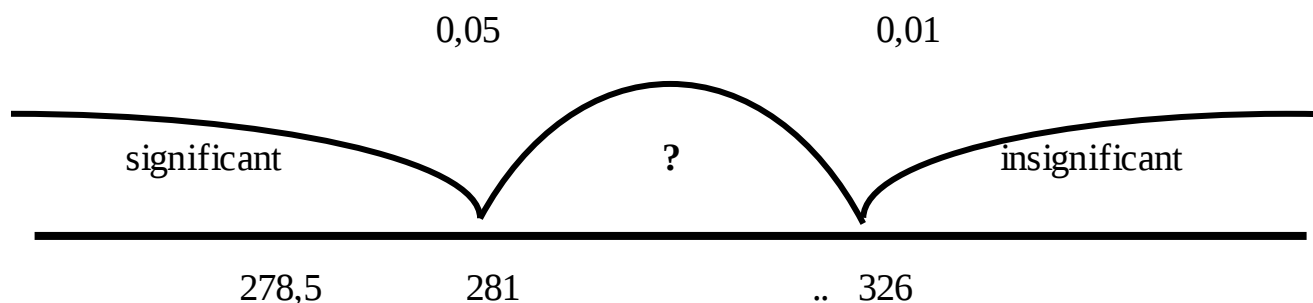


Figure 3.3. Correlation between $U_{emp.}$ and $U_{cr.}$

The null hypothesis was rejected and the conclusion about greater efficiency of model A was made.

In general the results of the experiment proved the efficacy of the suggested methodology of teaching reading English academic texts to philology students. Model A, which presupposed more class activities on the preparatory stage, turned out to be more effective than model B. Such results prove the importance of focusing on

academic discourse analysis and developing strategic awareness during classes which is helpful in case of challenging academic reading. Heuristic conversation, group discussion, class exercises help to stir up students curiosity and draw their attention to the important features of academic discourse and the most effective strategies. Post-tests showed a great increase in learning rates for all five criteria in both groups (Table 3.7). Students can easily understand the gist of academic texts (of maximum 10 scores students of both EG–1 and EG–2 got 8,8 scores each). The most difficult tasks were those for information analysis and integration which is quite expected as such tasks require a number of analytical and integrated skills.

After the experiment the students were asked to share their impressions on the activities suggested (the text of the questionnaire which was suggested to the students is presented in Appendix E). The answers (Appendix F) showed that of all the pre-test and post-test tasks the easiest were the ones for gist comprehension (3 %) and comprehension of a detail (29 %). The rest three tasks were much more challenging: 46 % evaluated as difficult the task for locating and understanding specific information, 61 % – for information analysis, 92 %– for information integration.

As for the exercises, for the majority of students the most difficult were tasks for information analysis (76 %) and information integration (83 %). 88 % claimed the importance of developing subject specific vocabulary and 81 % – subject knowledge. In general 92 % of students assessed positively the suggested system of exercises and tasks. For the rest 8 % the texts seemed either too difficult or not very interesting. 93 % claimed the necessity of further development of academic reading competence. 58 % used the additional complex of exercises and tasks which were not obligatory but could be used by students if they wished or felt the necessity to develop some skills. The students did such exercises because: a) teacher recommended (79 % of those 34 students who completed additional tasks), b) they wanted to get a good mark (85 %), c) they would work with academic texts in future (24 %), d) it was interesting for them (31 %). 91 % of these students demonstrated the sufficient level of academic reading competence. It is interesting that of these 34 students 21 were from EG–1 and 13 were from EG–2. We assumed that as group EG–1 had more class activities, the teacher had

more opportunities to motivate students. The rest of the students (25) did not do the additional tasks because: a) they were sure they had a sufficient level of academic reading competence (24 %), b) did not have enough time (64 %), c) the tasks were not interesting (24 %), d) they thought the obligatory exercises would help them to develop the necessary skills (76 %). 80 % of these students demonstrated the sufficient level of academic reading competence.

The analysis of the obtained results proved the necessity of developing motivation to self-study which can significantly improve students academic achievements.

The results of the experiment confirmed the effectiveness of the suggested methodology of teaching reading English academic texts to philology students, efficacy of the elaborated system of exercises and demonstrated the importance of focusing on academic discourse analysis and developing strategic awareness during classes.

3.3. Methodological recommendations on teaching reading English academic texts to philology students

To perform professional duties properly it is important for future philologists to acquire academic reading competence on an appropriate level.

In academic settings both intensive and extensive reading are usually used. Reading intensively, learners translate the whole text or challenging fragments into the first language and explain difficult pieces to better comprehend them. Reading extensively, students are interested in what they are reading and focus their attention on the meaning and ideas rather than on learning linguistic features of the text and analyzing its genre specifications.

It may seem that an extensive reading is much more appropriate for students and should dominate in university programs. However, as academic reading can be extremely challenging, and second language students have to master special skills for academic text reading, an integration of intensive and extensive reading seems to be the most appropriate approach.

Intensive reading should be done to check student comprehension of a typical text, help them understand it better, learn useful words, analyze ways of referring ideas in academic texts, study genre peculiarities and apply different strategies. Difficulties may arise when readers do not possess the necessary linguistic resources (which means, first of all, expanding student vocabulary on the topic), do not have sufficient background knowledge or do not have enough reading practice. Such difficulties will surely occur at the beginning so a translation of at least the most difficult points should be utilized.

Extensive reading is implied with the aim of getting useful information which can be utilized subsequently, improving comprehension skills, developing automaticity, activating background knowledge, expanding vocabulary and grammar knowledge, developing production skills (speaking and especially writing), promoting confidence and motivation.

Teachers can encourage extensive reading by assigning it as a homework (students should complete a certain amount of self-selected reading per week), incorporating silent reading as a part of a lesson alongside with intensive reading, provide class discussion on its results and main ideas (e.g., through individual or group oral presentations), assigning students to write a summary of what they have read, combining extensive reading with writing (in this case reading is seen as a source of ideas and as a model for students to analyse and imitate in their writing), equipping students with effective linguistic tools, providing them with a range of materials among which they may choose the most appropriate for them or giving students an opportunity to find the materials themselves.

The development of academic reading competence means mastering reading skills (first of all lexical and grammatical), reading comprehension skills, study skills. As the fourth-year students are supposed to have mastered all grammatical structures, teaching academic reading should be focused most on lexical skills development. However, it does not mean neglecting grammatical structures. We recommend analyzing grammatical features of academic texts to define most difficult structures typically used in academic discourse with further focus on them to promote automatic syntactic processing.

Teachers should remember that in academic settings students usually read with the purposes of (1) searching for information, 2) understanding general information, 3) understanding all details, 4) learning some information, 5) integrating information from different sources, 6) analyzing information, 7) writing (so the article serves as a model for completing some written task) and 8) searching for the information needed for writing.

Taking into account the above-mentioned purposes we recommend different types of academic reading: scanning which presupposes hurrying over most of the text until the necessary information is found (in this case students read with the speed of 400–500 and up to 600 words per minute and understand 40–50 % of information); skimming (reading quickly through the text to get its general idea (for example, when it is necessary to decide whether to read an article or not) with the speed of 180–190 words per minute and understanding 70–75 % of the text), reading for a detail (getting the meaning out of every word to fully understand the text, the speed of reading is 50–60 words per minute); critical reading which includes complex thinking on analyzing and evaluating author's meaning stated explicitly and implicitly, integrating the new ideas into the known ones, evaluating the author's arguments, developing own ideas using the writer's.

Teachers should remember that one type of reading rarely occurs in academic settings, and usually it is a combination of different types. For example, if students are reading with the aim of integrating some information they have to skim texts to understand their general ideas and decide whether they contain any useful information and are worth reading more thoroughly, to read for a detail with the aim of focusing on some difficult parts or analyzing them precisely.

To help students master new skills or improve existing ones it is effective to make them focus on one skill at a time and practice its application in different text with subsequent discussion of the process. In that case students eventually will be able to read strategically a challenging text.

The effectiveness of academic reading is influenced by many factors among which is extrinsic and intrinsic motivation to gain new knowledge, develop

academic reading ability, get a good mark etc.; social interaction, especially discussing the results, problems, ideas with groupmates, collaboration with other students on a project all of which enable them to make good choices, succeed in learning.

To enhance students' motivation it is necessary: to create opportunities for success and achieving goals, building students' self-confidence; incorporate interesting materials; provide social collaboration in fulfilling tasks and attaining targets, regular motivating feedback; suggest good tasks to build and support students' interest; promote effective learning strategies; encourage active students' participation; practice students decision-making concerning individual goals, texts, reading tasks; provide support with more challenging tasks; suggest the tasks that are just above the students' level to give them opportunity to perform successfully; encourage students' reflection on the reasons of failure; develop students' self-assessment abilities, mastery goals which mean the desire to constantly develop personal skills no matter how good students are; develop their autonomy by providing them with more options, encouraging to learn independently etc.; provide group support that develops the feeling of acceptance; develop initial curiosity which may turn into real personal interest.

A very important factor, that proved to contribute to academic achievements, as well as to motivation, is autonomy. On the one hand, autonomy is a goal itself as only autonomous learners can be really successful, but, on the other, a tool to attain learners' targets. Learners become autonomous only if an appropriate classroom culture has been created to promote it. Such culture means providing students with some degree of choice, delegating some responsibility to the learner, encouraging readers to set individual goals and determine ways of achieving them. Autonomy does not mean working alone, a peer collaboration can be an effective way to develop it and attain the learner's targets.

One more factor which turned out to have a positive influence on students' progress is developing students' reflection. In terms of teaching academic reading reflection can be described as a form of mental processing on achieving general and

learner's individual targets, effectiveness of one's learning, possible correctives, self-control and self-assessment. Reflection should be developed through problem-based tasks, encouraging students to analyze their achievements, discuss possible correctives, assess own performance, techniques and strategies used, compare it with teacher's or peer assessment.

Reading comprehension depends greatly on the strategies used, among which cognitive, metacognitive and compensation strategies are of major importance for academic reading.

The more efficiently readers use strategies in the first language reading, the more effectively they will employ them in foreign language comprehension. High level of language proficiency, flexible usage of relevant strategies depending on the purpose of reading and their transfer from the first language are crucial for effective academic reading. That is why it can be recommended to encourage students to reflect on the use of strategies in the first language reading and employ the most efficient of them while reading academic texts in English.

Readers must constantly monitor comprehension at various levels and when it fails, they must recognize the failure and make a decision whether to take immediate actions (e.g., rereading, jumping ahead in the text) or not (waiting for further clarification by the author and keeping the confusion in mind).

Comprehension should be monitored on different levels, and for this readers may be recommended to use: before reading strategies (activating background knowledge, anticipating the structure and the content etc.), strategies to understand words, sentences (e.g., using context clue, word structure analysis); strategies to interpret ideas (e.g., analyzing, generating questions etc.) and strategies to restructure and synthesize the text (e.g., taking notes, synthesizing etc.).

Teaching academic reading should be an individualized process. It is evident that instruction must be focused on an individual reader, which may include student's strategy knowledge and use assessment, personalized instruction that accommodates reader's needs and previous reading experience. To provide efficient strategy instruction we recommend that teachers should: 1) encourage students' analysis of

strategies used in the first and second language reading (it is useful to make two lists of strategies used – one for the first language reading and the other– for the second with subsequent analysis), 2) integrate strategy use and discussions about strategy use into classes, 3) develop student awareness of strategies, 4) introduce effective strategies, 5) encourage students to use strategies, 6) encourage class discussion and sharing experience on using strategies depending on the type of reading, 7) provide access to a wide range of academic texts, 8) create tasks that require strategic reading, 9) encourage each student to create a strategy development plan at the beginning of the course, track and analyse their usage of strategies, 10) motivate students' reflection on useful strategies in intensive and extensive reading, 11) track each student's progress in accomodating specific strategies.

One of the most efficient and typical of academic reading strategies is note-taking which is used with the aim of storing information and learning both the content and the language by writing or printing. Notes may be done in forms other than linguistic (e.g., sketches, concept maps, tables etc.). To fix-up comprehension students can mark the places in the text where they became confused and discuss them with peers or teachers, reread to better understand the meaning, read ahead paying attention to the confused point until their confusion is cleared. Students can also highlight key passages and make notes or brief annotations in the margins of the copy to review the notes later and easily recall the key points. Readers are also recommended to annotate with the aim of recording immediate reactions, questions, summarizing main points, evaluating them and relating the reading to other ideas and points of view.

Regardless of which strategy students are being instructed, we recommend that the teachers should 1) begin with an easier reading material, 2) explain the strategy clearly and thoroughly, 3) activate background knowledge, 4) focus on the potential benefits of using the strategy, give vivid examples, 5) model the strategy for the students, repeating the steps explained and using a think-aloud procedure, 6) provide students with opportunities to practice the strategy in groups or individually, 7) encourage feedback, 8) increase the difficulty level of the text and remind students

to use the strategy, 9) provide students with some brief written information about the strategy, 10) encourage student self-evaluation on how the strategy works.

It is important that both the teacher and the students be aware of research articles features. In such a case teachers will know what to focus on, how to prepare students for reading, and students will be prepared to work with academic texts. For example, text-structure awareness helps to recognize discourse-signaling systems (distinguish the information of primary importance, connections and correlations between ideas in the text, etc.).

Taking into account academic text peculiarities (impersonality, objectivity, neutrality, rationality, stringency, economy, content objectivity, descriptivity, accuracy, uniformity, clarity, precision, unambiguity, intertextuality and referentiality, use of unified terminology, avoidance of emotional and expressive elements, carefully and logically organised structure, use of long sentences loaded with content words, attitudinal adverbs, premodifiers and frequent nominalization, use of discourse linkers which contribute to the reader's orientation in the text and its interpretations) as well as curriculum requirements, we recommend the criteria for academic text selection: authenticity, motivating potential, relevance to course topics, content and linguistic accessibility, informational value, scientific novelty, stimulating effect for further activities, length.

To comply with the criterion of authenticity the articles for teaching academic reading should be written by scholars whose mother tongue is English, which will give students exposure to native-speaker language, demonstrate them examples of good academic discourse and language functioning in a professional context, serve as a sample for students' further academic writing. However, as more and more articles in recognized journals are published by non-native experts, the topic and content of which may be of utmost interest to students, we find it possible to suggest reading articles of non-native scholars if they meet other criteria and are published in reliable and recognized sources.

The second criterion of academic text selection is motivational which presupposes selection of texts which are of interest to the readers.

According to the relevance to course topics texts should correspond to the topic areas of subjects that have been learnt or are being studied. It is important to avoid topics that go beyond learned and students' conceptual reach as it will have a negative influence not only on the process of reading, but also on students' motivation to read. It is also very important that interdisciplinary links should be focused on, which will develop reading comprehension and enrich students' professional knowledge.

Academic texts can cause some linguistic difficulties the most important of which are connected with vocabulary and use of long composite sentences. So the articles should mainly contain vocabulary familiar to the students or the one that can be easily translated with the help of dictionaries, understood from the context or found in readers' textbooks. It does not mean that all the terms used must be familiar to students, but readers should be able to determine their meaning either from the context or by looking up in accessible sources.

Reading academic texts students do not only develop academic reading comprehension skills, but also improve subject knowledge and develop a more global understanding of linguistics and other related fields. Therefore there should be a strict correlation between the topic and content of the article and what students already know or are expected to know otherwise comprehension may break and, what is more, students' motivation may decrease.

The information presented in the text should be important to the reader. It is not the amount of new information that matters, but its value for the student at present and in future, and how well the new information correlates and integrates with the previous one and whether it can be used further.

The criterion of scientific novelty suggests selection modern articles from expert sources with high impact factor where scholars present the results of theoretical developments in the field of linguistics and language learning among which we recommend Journal of Linguistics, Linguistic Inquiry, ELT Journal, the Journal of English Linguistics, English Language and Linguistics, the Australian Journal of Linguistics etc.

The texts should stimulate and serve as a basis for different activities essential for attaining short-term and long-term goals.

We think texts for intensive and extensive reading may differ in length. Reading intensively, students translate the text sentence by sentence into the first language and explain difficult pieces to better comprehend. As it is quite time consuming, texts for intensive reading should not be too long. The analysis of research articles showed that on average their length varies between 20 and 30 pages. Articles for intensive reading should be not more than 20 pages (we may assume that some parts can be read intensively while others – extensively). As for extensive reading there is no need to establish limits for article length. In this case other criteria are of greater importance. It must be taken into account that if longer texts have been chosen, they should be linguistically and conceptually within students' reach.

Not only teachers but the students themselves must know the criteria as they will have to select texts. As for organizing extensive reading, it is highly advisable to provide students with the range of texts to be chosen for extensive academic reading as well as to encourage them to look for some on their own and share them with group-mates. It is also useful to create texts database and encourage students to add texts to the database created by the teacher. In this case learners will see themselves as independent readers who control their own reading as they can choose what to read and experience successful reading.

Teaching philology students English academic reading should be based on the following principles: motivational learning, mastering the linguistic and subject knowledge and skills in a cyclical manner, development of students' academic reading as an integrated skill, profession-oriented learning, correspondence to the students' level of subject knowledge and language proficiency.

According to the principle of motivational learning the materials provided and activities suggested should arouse students' interests, encourage them to use extra sources. The instructions to the exercises and tasks must be formulated in the way that demonstrates the purpose and thus motivates students to perform tasks. Using authentic texts as well as creating and maintaining a supportive and collaborative

learning environment through fast feedback, teachers attention to students needs, using pair and group activities, providing autonomous environment etc. will contribute to the development of students' motivation.

Mastering the linguistic and subject knowledge and skills in a cyclical manner means that previously taught material is reintroduced in subsequent units and is connected with a new material. The suggested types of exercises, tasks and their sequence should be applicable to different texts. The students repeatedly do the same exercises with a new text / set of texts on the same topic in class and as a homework. Each cycle has the same stages with reasonable variations.

The purpose of each cycle is to develop students' academic reading as an integrated skill. The main evidence for it is that language is viewed as a whole. Instruction should be planned around a curricular framework that integrates goals for the development of academic reading skills, provide meaningful intensive and extensive reading opportunities. Academic reading is closely connected, first of all, with speaking and writing. Thus, students write annotations, summaries etc. Speaking skills are developed during discussions, information interpretation in pair and group work.

According to the principle of profession-oriented learning all the texts should be professionally oriented and exercises should be aimed at the development of professional skills. The content and learning activities suggested must correspond to students' professional needs and interests.

Correspondence to the students' level of subject knowledge and language proficiency means that the text should be just above the learner's current level. If the text exceeds the students' level considerably, the following steps must be taken: 1) much preparatory work should be done, 2) students should be assisted in attaining the targets, 3) the task must focus on the points that readers can cope with, 4) students should be encouraged to use extra resources to do the tasks and must not be much limited in time, 5) pair work or group work can be employed to help students cope with a challenging text.

We suggest that teaching reading English academic texts to philology students should develop in three stages:

1. Preparatory stage which is aimed at promoting students understanding of structural and linguistic features of academic discourse and developing their strategic awareness.
2. Realization stage which is connected with reading a text. It consists of several sub-stages: pre-reading – activating students' background and subject knowledge, developing lexical, grammatical, prognostic skills, while-reading – developing reading comprehension as well as study skills, post-reading – improving reading comprehension, critical reading and study skills.
3. Integrative stage aimed at developing abilities to use the information from the text and integrate information from different sources. On this stage students should learn to use information in writing and speaking.

We suggest reading for a detail in class (with preliminary preparation at home which includes translation of unknown words, grammar analysis etc.) as in this case the teacher is able to control comprehension; detect gaps in students' subject, linguistic, study knowledge and skills and direct students to fill them; emphasize the most important information, facilitate analysis.

For home assignments all types of reading can be used because students' time is usually not so strictly limited as during classes and students may need to look for extra sources or look through several texts employing different types of reading depending on the task and the text itself (its difficulty, content, etc.) as well as students' personal and professional interests.

To teach philology students English academic reading we suggest a system of exercises and tasks that consists of three subsystems, which correlate with the above-mentioned stages, and contain groups of exercises and tasks. Subsystem 1 includes the following groups:

- 1.1. Promoting students understanding of structural features of academic discourse.
- 1.2. Promoting students understanding of linguistic features of academic discourse.

1.3. Building strategic awareness.

These exercises do not necessarily repeat in every cycle. If the students have acquired the necessary knowledge and developed awareness of discourse features and academic reading strategies, this stage can be omitted.

Subsystem 2 consists of the following exercises and tasks:

- pre-reading (aimed at preparing students to read a particular text, preventing comprehension breakdown which may be caused by the difficulty of the text and lack of students knowledge and skills, helping readers understand and establish purposes for reading a particular text which will assist them in using appropriate reading styles):

2.1. Activating subject knowledge.

2.2. Developing prognostic skills.

2.3. Developing lexical skills.

2.4. Developing grammatical skills.

- while-reading (developing study skills in a separate group of exercises and simultaneously with building academic reading comprehension skills):

2.5. Developing study skills.

2.6. Forming academic reading comprehension skills: skimming.

2.7. Forming academic reading comprehension skills: scanning.

2.8. Forming academic reading comprehension skills: reading for a detail.

- post-reading:

2.9. The improvement of study skills.

2.10. Developing academic reading comprehension skills.

2.11. Developing critical reading skills.

The group of exercises aimed at improving study skills increase students' awareness of the critical reading strategies. The students are supposed to apply these strategies to complete the exercises of the subsequent groups.

Subsystem 3 consists of two groups of exercises and tasks:

3.1. Developing abilities to integrate information from different sources.

3.2. Developing abilities to use the information from the text.

Students continue to improve study skills performing G 3.1–3.2.

Much attention in the system is paid to students' collaborative work as we support the view that cognitive development is stimulated by social interaction. So collaborative activities can be beneficial for increasing intrinsic motivation. Besides, we recommend that all the exercises and tasks be motivated which means that the instructions contain explanation why the exercise should be done (such an instruction will motivate students, help them realize why they should do the exercise or even choose whether to do it or not); comprise a reflective component which will encourage students self-reflection and develop corresponding skills; have the purposes clearly stated and focused on with the aim of motivating students and helping them to set individual goals. Besides, we recommend combining the teacher control with self-control and peer control which will promote students' autonomy.

To evaluate students' academic reading competence different forms of assessment should be used: 1) formative with the aim of detecting problems both in teaching and learning and preventing them from becoming worse; 2) a module assessment at the end of each module the purpose of which is not only to measure student's achievements, but also to inform about the gaps, and 3) a final assessment at the end of a semester. Besides, formative assessment must include self-assessment.

Self-assessment is a cyclical and ongoing process which consists of four components: learning goals (the central component), self-monitoring, self-evaluation, selection and implementation of necessary correctives if needed. Students should identify personal goals, monitor their learning and evaluate themselves on the basis of well-understood criteria (determined by the teacher or ideally by the teacher and the students together – such collaboration will allow students to understand the criteria better), and determine the next steps to enhance their own performance and attain the targets set.

Clear learning goals should be established in order to help students understand what they are expected to learn and set their own targets. Proficient readers can set very specific goals and shift them flexibly during reading whereas poor readers are not

likely to establish specific goals properly and are sure to be unable to adjust goals during the reading process. The fourth-year students are expected to have a sufficient level of reading proficiency and enough experience to be able to set specific goals providing that they are aware of general goals. However, it is recommended that the teacher should encourage students' goal setting by demonstrating how to do it, asking students to present their specific goals, discuss them, analyze how their goals change during reading and at the end of reading, whether, in their opinion, they achieved the goals set and if not, why and how they can be attained in future.

Self-monitoring concerns what students are doing, often in relation to external standards (e.g., which strategy use, which techniques employ, what sources adopt). Self-evaluation focuses on comparison of the achievements with targeted performance and thus gives students an idea of what they know or can do and what is still needed to be learnt and done. Then students have to decide on instructional correctives which may lead to the achievement of the desired results. The correctives may relate to the current tasks or to the future assignments.

The effectiveness of the self-assessment cycle much depends on the teacher's ability to prepare students for it by demonstrating main techniques, discussing and analyzing them in the classroom, comparing the results of self-assessment with teacher's assessment, regular feedback, analyzing possible correctives and their effectiveness with students. Students can be provided with self-assessment checklist at the end of the module to analyze the process and the results.

We assumed that the amount of hours can be equally divided between the four skills – reading, writing, listening and speaking. 25 % of study time can be dedicated to reading. However, academic reading cannot occupy all the time as student will have to read different types of texts. It is reasonable to dedicate 50 % of reading time to academic texts. As self-study assignments students are supposed to do some exercises, read texts, analyze them. The results are checked by the teacher or students themselves with the help of the keys. Besides, students are provided with additional academic texts and assignments which they can do on their own if they wish to improve their skills and demonstrate better results at the final test.

There is a correspondence between the modules and the cycle of exercises and tasks. Though types of exercises may repeat in each cycle/module, the materials differ.

On account of class hours limit, after each module there can be a test aimed at measuring students' achievements, determining the gaps, motivating students to develop skills and directing them in their further study. Besides, after two cycles the exercises on analyzing structural and linguistic features of academic discourse (preparatory stage) become of less importance and can be either omitted or done as a home assignment (if the teacher or the students themselves decide that they still need to do them). It is recommended that the exercises on building strategic awareness (preparatory stage) should also be done at home. Thus more class hours can be dedicated to students' analysis and discussion of the information and the obtained results.

English academic reading comprehension may be assessed by the following criteria:

- comprehension of the gist;
- comprehension of a detail;
- locating and understanding specific information;
- ability to analyze the information;
- capacity to integrate information.

To assess the first criterion (comprehension of the gist) True-False questions or multiple choice questions can be used. True-False questions are relatively easy to compose and score, but should be clear of ambiguity.

Comprehension of a detail can be checked with the help of multiple choice questions, short answer questions, filling gaps.

The ability to locate and understand specific information may be assessed by using short answer questions which are relatively easy to compose and score and demonstrate students comprehension of specific information, multiple matching, filling gaps, multiple choice questions.

To assess the ability to analyze the information multiple choice questions, open questions, True/False/Not given questions can be employed. The ability to integrate

information from different sources can be checked with open questions which seem to be the most appropriate as they enable students to demonstrate their understanding of the problem as a whole.

All in all, taking into account the theoretical and practical results of the conducted research we have developed and presented methodological recommendations on teaching philology students English academic reading.

Conclusions to chapter 3.

To verify the effectiveness of the suggested methodology of teaching reading English academic texts to philology students, efficacy of the elaborated system of exercises and tasks and determine a more effective model of the two suggested we conducted an experiment which consisted of the following stages: developing experimental materials, developing assessment criteria for English academic reading comprehension, experimental groups design, conducting pre-tests, verification of the experimental groups equality, experimental study, conducting post-tests, data processing, analysis of the results and their interpretation. The independent variable was the correlation between class and home activities at the preparatory stage.

The conducted experiment was *educational* as it focused on the development of philology students English academic reading competence; *natural* as it was conducted in students' typical learning environment without any selection of participants, *vertical* because during the experiment we had to evaluate the efficiency of the developed methodology of teaching English academic reading philology students by comparing the level of reading competence before the experiment and after it; *horizontal* as we also had to compare the effectiveness of the two suggested models. According to the *model A* students discussed and practiced efficient strategies during the classes and then used them doing home tasks. Besides, at the first (preparatory) stage, which is aimed at familiarizing students with structural and linguistic features of academic discourse, a heuristic conversation was employed during the classes to stir up students' curiosity and help them understand the main characteristics of the research articles to better comprehend them. Students did a part of exercises, which

developed their awareness of academic discourse, in classes and a part as a home assignment. In the *model B* students were provided with all the necessary information about the effective strategies and the important research article features and recommended to use the information to do suggested home tasks.

The analysis of modern literature, the reading test formats of internationally recognized exams which contain academic texts or at least passages in formal written English as well as purposes of reading in academic settings (to search for information, learn from text, integrate information from different sources, analyze and critique text, write, search for information needed for writing) enabled the development of the following assessment criteria for English academic reading competence: comprehension of the gist, comprehension of a detail, locating and understanding specific information, ability to analyze the information, capacity to integrate information. To assess comprehension of the gist True-False questions, which are relatively easy to compose and score, but should be clear of ambiguity, were used. Comprehension of a detail was checked with the help of multiple choice questions which are among the most common for reading comprehension. The ability to locate and understand specific information was checked with the help of short answer questions, which are relatively easy to compose and score and demonstrate students comprehension of specific information. To assess the ability to analyze the information and integrate information from different sources open questions were employed which enabled students to demonstrate their understanding of the problem.

The results of the experiment, which were validated with the help of Fisher's angular transformation and the Mann-Whitney U-test, confirmed the efficacy of the suggested methodology of teaching reading English academic texts to philology students, the elaborated system of exercises and tasks and the effectiveness of both models. However, model A, which includes more class activities on the preparatory stage, turned out to be more efficacious than model B. Such results prove that in case of challenging academic reading it is important to focus on academic discourse analysis and the development of strategic awareness during classes. Heuristic conversation, group

discussion, class exercises help to stir up students curiosity and draw their attention to the important features of academic discourse and the most effective strategies.

On the basis of the obtained results methodological recommendations on teaching reading English academic texts to philology students have been elaborated.

The basic concepts of the chapter are presented in the publication [47].

CONCLUSIONS

1. Modern scientific literature analysis on the topic enabled the conclusion that teaching future philologists English academic reading should be based on the following ideas: developing grammatical and especially lexical skills which are essential for reading comprehension; academic texts analysis with the aim of further focusing on their main features and predicting possible difficulties which students can face; activating students' prior knowledge; careful text selection with the focus on students' linguistic and subject knowledge; focus on visual information and means of its visualization; practicing intensive and extensive reading of academic texts; teaching strategies through direct instruction, encouraging learners to select appropriate strategies according to the type of the text and reading goals, individualize their strategy repertoires; problem-based learning with the aim of developing creativity, reflection, personal qualities; individual approach to learners.

The analysis of psychological foundations showed that reading consists of lower-level processes (automatic word recognition, rapid and automatic syntactic processing, combining word and structural meanings into units) as well as higher-level processes (coordination of main and supporting ideas of the text, interpretation of the information from the text). Skills which are typical of lower-level processes can be relatively automatic while skills of upper-level processes are not automatic. Reading comprehension processes of fluent readers work simultaneously, and the purpose defines reading processes emphasized. Working memory plays an exceptional role on both levels as its major component – executive control – is recognized as central to comprehension processing.

Academic reading competence is the ability to read authentic academic texts of different types demonstrating different levels of understanding depending on the objectives.

Academic reading competence consists of explicit and implicit knowledge, reading skills (lexical and grammatical) which refer to the lower-level processes,

reading comprehension skills relating to higher-level processes and study skills. All the components of academic reading competence have been specified in the dissertation.

It has been proved that academic reading competence development is influenced by the following factors: learning goals, motivation, practice, subject knowledge, strategy use, social interaction, self-reflection, autonomy support, correctly organized instruction. We consider the latter the dominant one which influences all the other factors.

2. On the basis of modern literature study and the analysis of the results of the survey conducted among the fourth year philology students the conclusion has been made about the necessity of explicit reading strategy instruction and the significance of the first language strategies which can be effectively transferred into the second language reading and compensate for insufficient second language proficiency. Direct (memory, cognitive and compensation) and indirect (metacognitive, social and affective) strategies, which are incorporated in academic reading, have been specified in the chapter. The conclusion has been made about the necessity to focus on cognitive, metacognitive and compensation strategies in teaching academic reading.

Much attention in academic reading should be paid to acquiring strategies that monitor comprehension on different levels (before reading strategies, strategies to understand words, sentences, strategies to interpret ideas, strategies to restructure and synthesize the text).

3. On the basis of the analysis of 47 articles from recognized scientific journals (*Journal of English Linguistics*, *International Journal of English Studies*, *ELT Journal*) the main features of academic texts which students should be aware of to better comprehend the texts have been determined: impersonality, objectivity, neutrality, rationality, stringency, economy, content objectivity, descriptivity, accuracy, uniformity, clarity, precision, unambiguity, intertextuality and referentiality, use of unified terminology, avoidance of emotional and expressive elements, carefully and logically organized structure, use of long sentences loaded

with content words, attitudinal adverbs, premodifiers and frequent nominalization, use of discourse linkers which contribute to the reader's orientation in the text and its interpretations.

Taking into account academic text features as well as curriculum requirements, we have presented and substantiated the criteria for text selection: authenticity, motivating potential, relevance to course topics, content and linguistic accessibility, informational value, scientific novelty, stimulating effect for further activities, length.

4. Teaching reading English academic texts to philology students should be based on the following principles: motivational learning, mastering the linguistic and subject knowledge and skills in a cyclical manner, development of students' academic reading as an integrated skill, profession-oriented learning, correspondence to the students' level of subject knowledge and language proficiency.

The following stages of teaching reading English academic texts to philology students have been determined: *preparatory stage* aimed at promoting students understanding of structural and linguistic features of academic discourse and developing their strategic awareness; *realization stage* which is connected with reading a text and consists of sub-stages (pre-reading directed to activating students' background and subject knowledge, developing lexical, grammatical, prognostic skills; while-reading aimed at developing reading comprehension as well as study skills; post-reading designed to improve critical reading and study skills); *integrative stage* aimed at developing abilities to use the information from the text and integrate information from different sources.

The elaborated system of exercises and tasks for teaching philology students English academic reading consists of three subsystems which correlate with the stages and include groups of exercises and tasks: *subsystem 1* (1.1. Promoting students understanding of structural features of academic discourse; 1.2. Promoting students understanding of linguistic features of academic discourse; 1.3. Building strategic awareness); *subsystem 2* (pre-reading: 2.1. Activating subject knowledge; 2.2. Developing prognostic skills; 2.3. Developing lexical skills; 2.4. Developing grammatical skills; while-reading: 2.5. Developing study skills; 2.6. Forming

academic reading comprehension skills: skimming; 2.7. Forming academic reading comprehension skills: scanning; 2.8. Forming academic reading comprehension skills: reading for a detail; post-reading; 2.9. The improvement of study skills; 2.10. Developing academic reading comprehension skills; 2.11. Developing critical reading skills); *subsystem 3* (3.1. Developing abilities to integrate information from different sources; 3.2. Developing abilities to use the information from the text).

The suggested system has been developed in compliance with the factors facilitating the development of academic reading competence (clearly defined and accepted learning goals, intrinsic and extrinsic motivation, practice, subject knowledge, strategy use, social interaction, self-reflection, autonomy support, correctly organized instruction). The main characteristic features of the system are as follows: 1) all the exercises and tasks are motivated which means that the instructions contain explanation why the exercise should be done; 2) most exercises and tasks comprise a reflective component which will encourage students self-reflection and develop corresponding skills; 3) the purposes of the exercises and tasks are clearly stated and focused on with the aim of motivating students and helping them to set individual goals, 4) much attention is paid to activating and increasing subject knowledge before reading an article, 5) strategy development is focused on at every stage; 6) teacher control is combined with self-control which promotes students' autonomy; 7) academic reading skills are developed in integration with speaking and writing skills; 8) the majority of exercises and tasks presuppose problem solving; 9) there is a combination of individual activities with pair and group work.

The elaborated model of teaching reading English academic texts to philology students is relevant to the principles of teaching, presupposes coherence, unity, interconnection dependencies of its components, consistency, considers peculiarities of the module system. The model has been built with account to the object (the process of teaching reading English academic texts to philology students), purpose (determining the succession of teacher's action aimed at developing academic reading comprehension skills), subjects (the fourth-year future philologists), expected results (ability to understand the gist and details of

academic texts, analyze them critically adjusting the type of reading and the strategies used to the purpose), the university subject/subjects the model represents (Practical English integrated with other subjects), learning aids (the suggested system of exercises and tasks, complexes of exercises and tasks developed within the system as well as all the learning materials selected), assessment of the achievements (formative which includes regular self-assessment, module assessment, final assessment).

5. The analysis of modern literature, the reading test formats of internationally recognized exams which contain academic texts or at least passages in formal written English as well as purposes of reading in academic settings (to search for information, learn from text, integrate information from different sources, analyze and critique text, write, search for information needed for writing) enabled the development of the following assessment criteria for English academic reading comprehension: comprehension of the gist, comprehension of a detail, locating and understanding specific information, ability to analyze the information, capacity to integrate information.

The results of the experiment, which were validated with the help of Fisher's angular transformation and the Mann-Whitney U-test, confirmed the efficacy of the suggested methodology of teaching philology students English academic reading, the elaborated system of exercises and tasks and the effectiveness of both models. However, model A, which includes more class activities on the preparatory stage, turned out to be more efficacious than model B. Such results prove the importance of focusing on academic discourse analysis and developing strategic awareness during classes which is helpful in case of challenging academic reading. Heuristic conversation, group discussion, class exercises help to stir up students curiosity and draw their attention to the important features of academic discourse and the most effective strategies.

On the basis of the obtained results methodological recommendations on teaching philology students English academic reading have been elaborated.

Further research should focus on developing methodology of teaching philology students integrated academic reading and writing.

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APPENDICES

Appendix A

Survey for students

Dear students!

We ask you to express your opinion on teaching academic reading. The information from the survey will be used only for the research on the topic “teaching philology students English academic reading”.

Please, answer the questions or tick «√» the chosen answer / answers.

Thank you for cooperation!

1. What are the real reasons of your studying foreign languages?
 - professional;
 - I like foreign languages;
 - I like the process of learning foreign languages;
 - Other _____
2. Do you like reading in a foreign language?
 - yes;
 - no
3. What do you like to read best in English? (e.g. magazines, catalogues, novels, comics, newspapers, articles etc.). _____
4. Do you read anything on your own (other than what you are assigned by the teacher)?
 - yes;
 - no
5. If the previous answer was yes, how many pages do you read per month on your own ?
 - 1-2 per week;
 - 3-5 per week;
 - 6-10 per week;
 - 10-20 per week;
 - more than 20 per week

6. If the answer to question 4 was *no*, indicate the reason:
- have no time;
 - see no necessity as we are assigned a lot of reading;
 - do not like to read;
 - cannot find anything interesting to read;
 - other _____
7. Do you find academic reading
- relaxing;
 - a chore;
 - interesting;
 - other _____
8. Do you think reading research articles useful for you?
- yes;
 - no
9. If your previous answer is *yes*, explain why.
- It is useful for my future career;
 - It can expand my content knowledge;
 - It can improve reading comprehension skills;
 - It can help to develop lexical skills
 - Other _____
10. If your answer to question 8 is *no*, explain why.

Appendix B

The results of the survey

1. What are the real reasons of your studying foreign languages?
 - professional – 73 %
 - I like foreign languages – 78 %;
 - I like the process of learning foreign languages – 54 %;
2. Do you like reading in a foreign language?
 - yes – 71 %;
 - no – 29 %
3. What do you like to read best in English? (e.g. magazines, catalogues, novels, comics, newspapers, articles etc.):
 - magazines – 46 %;
 - novels – 68 %;
 - newspapers – 15 %;
 - blogs – 31 %
4. Do you read anything on your own (other than what you are assigned by the teacher)?
 - yes – 61 %;
 - no – 39 %
5. If the previous answer was yes, how much do you read per month on your own?
 - 1-2 pages per week – 8 %;
 - 3-5 pages per week – 31 %;
 - 6-10 pages per week – 33 %;
 - 10-20 pages per week – 22 %;
 - more than 20 pages per week – 6 %.

6. If the answer to question 4 was *no*, indicate the reason:
 - have no time – 57 %;
 - see no necessity as we are assigned a lot of reading – 74 %;
 - do not like to read much – 13 %;
 - cannot find anything interesting to read – 9 %
7. Do you find academic reading
 - a chore – 66 %;
 - interesting – 34 %
8. Do you think reading research articles useful for you?
 - yes – 86 %;
 - no – 14 %
9. If your previous answer is *yes*, explain why.
 - It is useful for my future career – 77 %;
 - It can expand my content knowledge – 51 %;
 - It can improve reading comprehension skills – 21 %;
 - It can help to develop lexical skills – 6 %
10. If your answer to question 8 is *no*, explain why.
 - I do not think I will have to read research articles as a professional duty – 100 %.

Appendix C

Texts used in exercises and tasks

Appendix C. 1

The Role of Context in Word Meaning Construction: A Case Study

Maria Dolores Porto Requejo

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ABSTRACT

The role of context in the interpretation of a linguistic unit has long been considered, even if from different perspectives: from the view that regards context as an extralinguistic feature, to the position that meaning is only meaning in use and therefore, pragmatics and semantics are inseparable. Still, context, both linguistic and situational, is often considered as an a posteriori factor in linguistic analysis. However, when language is studied in use, context always comes first, directing the process of meaning construction from the very beginning. In the present paper, a case study will provide evidence for these claims.

KEYWORDS: Context, meaning construction, lexical meaning, pragmatics, cognitive semantics

I. INTRODUCTION

This paper is about context, particularly about the way in which context not only affects but directs construction meaning. From a Cognitive Linguistics approach, I will claim that context is not some extra information we turn to when bare semantics is not enough. On the contrary, in real uses, context always comes first, that is, before the linguistic unit can be interpreted there is a big amount of information available to participants that will direct the process of meaning construction and determine which sense, from all the possible ones, must be selected.

After a brief account of some of the main assumptions of Cognitive Linguistics regarding context, such as the impossibility of separating semantics from pragmatics, I will analyse the meaning construction of the word *black* in a specific context. The whole sentence in which the word occurs, the type of text, the images accompanying it, the situational context, etc. will be taken into consideration. In this way, the impossibility to clearly separate semantics and pragmatics in the process of meaning construction will become apparent, as well as the essential role that context plays in the process.

II. THE SCOPE OF CONTEXT IN LINGUISTICS

Context is not a new object of study in linguistics. It has long been considered an essential factor for the interpretation of linguistic expressions. As early as the 1930s, Firth had started to work on linguistic corpora, and already pointed out that “the complete meaning of a word is always contextual, and no study of meaning apart from a complete context can be taken seriously” (Firth 1935: 37). But it was around the 1970s that context became the focus of most linguistic trends. Among the several contributions from this time, there was Bransford and Johnson’s (1972) claim that the

understanding of a sentence does not only depend on our knowledge of the language, but also on our knowledge of the world. According to these authors, a *semantic anomaly* only occurs when it is impossible to establish a relationship between a sentence and some relevant aspect of our knowledge of the world (Bransford & Johnson, 1972, 1973). Also, Fillmore's theory of *frames* (Fillmore, 1977, 1985) and Schank and Abelson's *scripts* tried to introduce context and participants' knowledge of the world in the meaning of a linguistic unit (Schank & Abelson, 1977). Typical examples are the COMMERCIAL EVENT (Fillmore, 1977: 104 ff) and the RESTAURANT SCRIPT (Schank & Abelson, 1977: 42 ff.). Both theories involve that hearers can fill the gaps of information in a linguistic expression with their previous knowledge about what implies, for instance, eating in a restaurant (entering the restaurant, being seated, reading the menu, ordering, etc.). For example, if we read:

(1) John left the restaurant immediately after the phone call we assume that John paid the bill before leaving, unless we are explicitly told otherwise.

After that, Pragmatics came into the scene, to openly deal with issues that had not been usually addressed in other areas of linguistics, such as context, implicatures, negotiation of meaning, etc... In the 1980s, Sperber and Wilson's Relevance Theory went deeper into the participants' intention by considering inferences (Sperber & Wilson, 1986). In their theory, the same sentence can convey different meanings depending on the situation in which it is uttered, the participants, their intentions..., that is, on the context.

In all these approaches, however, context has typically been considered *a posteriori*. That is, the idea underlying most of these approaches to contextual meaning is that whenever a linguistic expression cannot be straightforwardly interpreted, we turn to context to find some extra cues in order to get the right meaning.

As a contrast, in the last twenty years, Cognitive Linguistics has always made a point of integrating context into meaning. As a matter of fact, its object of study is not language as an abstract entity, but language to mean, i.e. language in use, and it is quite obvious that real language use must necessarily involve context.

It must be pointed out here that context is used here in its broadest sense, since anything around a particular word can potentially affect its meaning. In Werth's words:

The context of a piece of language (..) is its surrounding environment. But this can include as little as the articulatory movements immediately before and after it, or as much as the whole universe, with its past and future (Werth, 1999: 78-79)

In order to reasonably delimit the scope of context, it is widely agreed that context can be divided into linguistic and situational context. Linguistic context would encompass the phonetic, morphological, syntactic or textual material surrounding to the word, whereas situational context entails anything to do with the immediate situation and the socio-cultural background in which the language event takes place. Note that it is not only the objective situational context that should be taken into account, since the individual experiences, beliefs, intentions and perceptions of the participants can also affect the way in which meaning is constructed for a particular communication event.

III. CONTEXT IN COGNITIVE LINGUISTICS

It is a major claim in Cognitive Linguistics that words do not contain meanings. Instead, we use words as mere instructions to construct the meaning of a linguistic expression. Therefore, meaning is not compositional, so the meaning of an utterance cannot be reduced to the addition of the meaning of its parts, either words or morphemes (see Croft & Cruse, 2004; Dirven & Vespoor, 1998; Evans & Green, 2006; Fauconnier, 1994; Langacker, 1987, 1991, 1999; Talmy, 2000; among others).

Another tenet in Cognitive Linguistics is that polysemy is the norm. Most words are polysemous and their possible uses in different contexts are organized in radial prototypical categories. Consequently, both in the production and the interpretation of utterances, there is a continuous process of selection among the possible senses where context plays a major role. This organization in prototypical categories allows new senses for a linguistic unit to be created and acquired without substantially altering the whole category, by simply establishing new links to any of the already existing senses in the category (Geeraerts, 1997; Geeraerts, Grondelaers and Bakena, 1994; Langacker, 1991, 1999; Taylor 1995).

Considering this, interpreting an utterance is a matter of putting together all the pieces to construct its meaning; the *pieces* can be purely linguistic, as well as any kind of individual background knowledge of the participants, memories, experiences, etc. that can affect a particular communication event. Thus, the conventional meaning of the words that conform an utterance, what traditionally has been called *literal meaning*, is but a small piece of the whole, just one of the cues that guide the process of meaning construction. All the others come from what we broadly refer to as *context*.

Cognitive Linguistics does not consider context as an addition to meaning, but an essential part of it. For cognitive semanticists every lexical concept is profiled against a base or background (Langacker, 1987, 1991). For example, the concept of FINGER can only be appropriately interpreted if profiled against another concept, HAND, which acts as a base. Thus, both base and profile together conform the meaning of a lexical item *finger*. This means that no linguistic unit can be understood isolatedly, because all lexical concepts presuppose others. Consequently, all our knowledge of the world can be seen as a huge network of interconnected concepts; a word is actually a point of access to the entire network of encyclopaedic knowledge (Langacker, 1987, 1999), just the starting point of the process of meaning construction. The range of possible associations that can be made during the process is potentially infinite.

For this reason, Cognitive Linguistics does not separate linguistic from encyclopaedic knowledge, or even semantics from pragmatics. Instead, most of what is said about meaning in Cognitive Linguistics incorporates aspects that are often regarded as extralinguistic in other approaches. In *Idealised Cognitive Models* (ICMs) (Lakoff, 1987), as well as in *domains* (Langacker, 1987), *frames* (Fillmore, 1985) or *mental spaces* (Fauconnier, 1994), there is an idealized version of the world constructed from previous experiences. It follows that no meaning is possible disregarding the participants' encyclopaedic knowledge, their perceptions, their cognitive capacities.

IV. A CASE STUDY: *BLUE IS THE NEW BLACK*.

As stated above, Cognitive Linguistics makes a point of studying the language in use. It is therefore a *usage-based* model, as it holds that a word only comes to be meaningful as a consequence of use and, consequently, context of use guides meaning construction (Evans & Green, 2006: 211 ff.). As mentioned before, context is not something we turn to when everything else, i.e. purely linguistic knowledge, fails. In real situations, context always comes first. Consider the following sentence:

(1) Blue is the new black

It is a quite straightforward sentence, very simple syntactically and its words are quite common; still it cannot be interpreted by the mere addition of the meaning of the parts. When trying to make sense of this sentence, hearers do not go through a list of possible meanings of blue or black (see below), hypothetically stored in their minds as in a dictionary, to see which matches better with the rest of the sentence:

- i. black = black colour
- ii. black = excellence (as in black label)
- iii. black = negative (as in black future)
- iv. black = out of light (as in blackout)
- v. etc...

Instead, hearers try to understand the sentence as a whole, and in order to do so, they probably search in their memory for a previous experience where this sentence could fit, a situation where blue colour could become black for some reason. Therefore, the key here is not the lack of a stored meaning, but the lack of a proper context. As soon as the place, text or situation where this sentence could belong to is found, you would have the key to construct its meaning.

We, as linguists, may be quite used to this kind of isolated sentences that we analyse thoroughly; after this, we look for the various potential contexts where they would be meaningful. However, this only happens in linguistics. In real life, context always comes first and thus, if this sentence were uttered in a real situation, all participants would already have a big amount of information about the ongoing language event and the right sense of, say, black would be automatically selected without going through other possible ones first.

This fact evidences another interesting aspect of meaning construction that contradicts some traditional views of compositionality: the meaning of a particular word in a sentence is only clear when we know the meaning of the whole. Certainly, there is something like a conventional core meaning for lexical items, but it is rather schematic, and, as a matter of fact, this conventional meaning is an abstraction from the different contexts where that particular word has been encountered before (Evans & Green, 2006: 213). So, once again, context comes before coded meaning.

Deidre Wilson (2004) deals with a sentence similar to this one in her paper on relevance theory and lexical pragmatics:

(2) Brown is the new black.

Since her view is mainly pragmatic, it is significant the way in which Wilson rejects the idea that polysemy can be *enough* for the right interpretation of the sentence:

Appeals to polysemy are probably justified in many cases. However, since each encoded sense of a polysemous word may undergo further pragmatic processing, polysemy does not eliminate the need for lexical pragmatics (Wilson 2004: 347)

She considers that sentence (2) is a case of category extension, where *black* would designate an *ad hoc* category, i.e. one made for the occasion, that could be defined as “staple colours in a fashion wardrobe” (Wilson, 2004: 345). Thus, the meaning of the sentence is that *brown* must now be included as a new member in the category where *black* is the prototype.

This is a very satisfactory pragmatic explanation, but from a cognitive approach, pragmatics is part of the meaning and cannot be considered as some sort of secondary automatic processing “to fine-tune the interpretation of virtually every word (Wilson, 2004: 347). My claim is that context comes first, so the process of meaning construction is already guided by context and there is no need of further fine-tuning.

To start with, sentences (1) and (2) are probably too general to be real. As a matter of fact, sentence (1) is actually a simplification of a more complex headline:

(3) Aqua Blue Crush. A first glimpse at “the new black”

It could be claimed that sentences (1) and (3) have the same meaning, but no doubt there is much more information in (3). Everything, from the specification *aqua blue*, and not just *dark blue* or *light blue*, to the inverted commas for *the new black*, provides lots of information about how to interpret the sentence. Still, these are but little clues from a purely linguistic context. The whole context of the sentence is shown in Figure 1 (From *Time* magazine. October 2004):



Figure 1. Magazine article

The point is, then, that before we even start reading this headline, we are already immersed in blue colour. When the reader turns over to this page, the image of a big blue gown, a model in the middle of a fashion parade and some smaller photos of other complements, also in blue, makes sense of the headline *Aqua Blue Crush*. There is no chance of considering which hue of blue is *aqua blue*, since the image reached the reader’s mind before he could even start reading. It must be also observed that even the titles of the captions, the name of the section on the top left corner of the page, as well as the initial capital letter are all blue, too, or rather *aqua blue*. So, blue colour is everywhere on this page. Besides, the FASHION domain is immediately accessed through the images and the name of the section, as much as through the register employed all throughout the article.

As for the meaning of the new black, see Figure 2 for a (partial) possible representation of the category of senses that compose the conventional meaning of *black*:

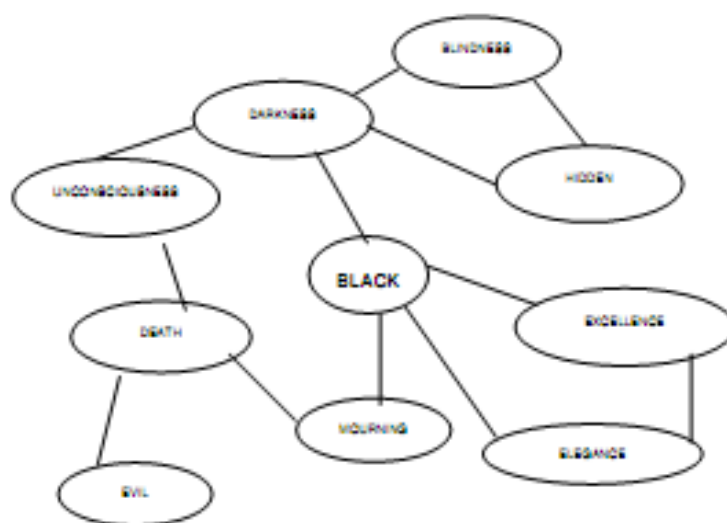


Figure 2. Category of senses for *black*

The centre of the category is occupied by the colour in the colour spectrum, the prototypical sense of the word *black*. Then, there are several other senses that can be associated to the prototype. So, for instance, black is the darkest colour, or rather the absence of colours, so black connects directly with concepts such as DARKNESS or BLINDNESS, and also indirectly, that is, by means of metaphorical projections, with the concepts of UNCONSCIOUSNESS and DEATH. Besides, there is a whole network of knowledge that connects BLACK with DEATH, at least for Western cultures and so for instance, *black* also means “mourning”. Moreover, and as a consequence of these associations, it has a sense of “negative” as in expressions like *black future*. On the other hand, there is also a network of links that associate black to the idea of EXCELLENCE, as in *black label* or *black belt* in martial arts.

However, all this is just a sort of formal, conventional analysis of possible meanings that does not reflect the real processing of meaning construction, since none of these senses will probably be contemplated by the reader of the article in the magazine. Who would think of DARKNESS, EVIL or DEATH when first starting reading this page? Since the context is FASHION, the only senses activated by black in the headline will probably be those related to colours in clothes and in fashion. In Croft’s words, contextual factors “modulate” or “conceptually highlight” different aspects of our knowledge associated with a particular entity (Croft, 1993).

What is more, it is highly unlikely that readers of the article even consider the central prototypical sense of the word *black*. As stated above, the reader is immersed in blue even before starting reading the headline, so by the time the sentence (3) is interpreted, the reader already knows that *black* does not mean “black colour”, because, by looking at the photos and the whole page, it is clear that this is a text about “blue colour”.

This takes us to the idea, already pointed by Croft (1993) and also by Evans (2006), that the individual meaning of the words is determined by utterance meaning rather than the other way round. “From this perspective, meaning construction involves first determining the meaning of the whole before the contributions of the parts can be established.” (Evans, 2006: 516)

One last factor in meaning construction is the individual experience and background knowledge of the participants. The possibilities that you have already guessed the meaning of the expression *new black*, greatly depend on your own personal interest in fashion; you may or may not know that black is a very recurrent colour in fashion, partly because it is considered elegant, partly because it combines easily with all other colours. As a consequence, fashion conscious people are expected to have several black pieces of clothing in their wardrobes. The author of the article, anticipating for the cases in which the reader is not such a connoisseur, provides an explicit definition of black at the very beginning of the article:

(4) one color that keeps popping up on clothes, housewares and paint chips

This explanation reinforces the intuition that the main topic of the article is that blue is everywhere, as much as it is on the page. Certainly, this sort of definition is not so common in everyday language, but it must be taken into account that this is a magazine article and in the language of the press, headlines are typically interpreted cataphorically (White *et al.* 2006).

Finally, a new sense has been added to the meaning of *black*, at least a new sense that will be maintained for as long as the reading of the article is taking place. Thus, towards the end of the article, the word *black* is used with that new sense without the need of, say, inverted commas or any further explanation:

(5) Nancy Reagan almost single-handedly made red the new black

Sentence (5) obviously means that Nancy Reagan wore more red clothes than any other colour. This semantic extension of the word *black* might become a conventionalized sense and, therefore, become part of its meaning permanently, if not for general use, at least for the fashion field. In this sense, there is much work on the role of context and encyclopaedic knowledge in the development of new senses and semantic change, either from a pragmatic perspective, including relevance, or from a more cognitive one (Croft, 2000; Traugott & Dasher, 2002; Tyler & Evans, 2003; Wilson, 2004).

V. CONCLUSIONS

Our analysis of the meaning of *black* in its proper context has evidenced how the meaning of an utterance goes far beyond the meaning of its parts. What is more, the interpretation of the whole is previous to the decoding of the meaning of each word, that is, it is a *Gestalt* where we perceive the whole before we come to the analysis of its components (Croft & Cruse, 2004: 100). This whole cannot be reduced to its linguistic elements, but must also include everything surrounding the language event, what we have called here its *context*.

Furthermore, it has been shown how it is impossible to distinguish between semantics and pragmatics when it comes to the study of a real language event. Any account of the meaning construction of a linguistic unit isolated from a real context

can only be hypothetical and will necessarily be forced to consider a number of different possibilities where context is the only answer to decide which is the most appropriate. However, in real life, the range of senses to choose from is considerably reduced, as context is not something to take into account on a second thought, but the leading feature of discourse, and what guides the process of meaning construction. Most of the possibilities carefully analysed by linguists in a sort of “language lab”, as if sterilised from pragmatic aspects, just do not exist when it comes to real use. In this sense, Evans and Tyler argue that “pragmatic meaning, rather than coded meaning, is ‘real’ meaning” (Evans & Green, 2006: 216). Coded meaning, as seen, for instance, in dictionaries, is in most cases nothing more than an abstraction made from all the previous contexts where the word has been used before. And this is finally why we should conclude that context is what leads the process of meaning construction.

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Appendix C. 2

English as a lingua franca: ontology and ideology

Andrew Sewell

This article examines certain aspects of the debate surrounding English as a Lingua Franca (ELF). It argues that in some ways, neither ELF nor its opponents have come to terms with the complexities of English in a globalized world. By defining ELF according to how it differs from native-speaker language use, ELF researchers have tended to essentialize and exaggerate these differences, creating a false dichotomy between ‘ELF’ and ‘non-ELF’. At the same time, the conservatism of language teaching and testing in many parts of the world also suggests that there is further scope for an enhanced awareness of language variation. A desirable outcome of the debate would be the realization that all language use – whether by native or non-native speakers – is variable, emergent, contextual, and subject to hybridity and change.

Introduction

The Point and Counterpoint exchange between Sowden (2012) and Cogo (2012) typifies the lively debate that has arisen between adherents and opponents of English as a Lingua Franca (ELF). In her response to Sowden’s critique, Cogo successfully deals with a number of misconceptions about the nature of ELF, both as a linguistic phenomenon and as an emerging research paradigm. However, in doing so, she draws attention to several unanswered questions about ELF. By considering some of these questions, I will make the case that the positions taken by both Cogo and Sowden fail to deal adequately with the complex and dynamic nature of language use in today’s world.

The first question arises from Sowden’s identification of the ontological issues surrounding ELF and relates to whether and how it is different from existing varieties. A consideration of this question suggests that the boundaries between ELF and ENL (English as a Native Language), or between the language use of non-native and native speakers, cannot be drawn as neatly as Cogo’s article suggests. Following on from this non-essentialist view of language, the present article then asks how ELT professionals and learners of English should respond to the issues generated by the ELF debate. In doing so, it outlines a view of language use that places variation at centre stage.

How different is ELF?

As Sowden notes (op.cit.: 91), there have been contradictions in the way ELF is presented. Is it an emerging variety, an emergent process, a set of linguistic resources, or some combination of these? Cogo’s response illustrates the recent move away from language features and towards processes and practices in ELF (see also Jenkins, Cogo, and Dewey 2011). ELF is no longer seen as a variety, but rather as a set of practices. The aim of ELF research is not to identify common features, but to highlight the pragmatic strategies employed by speakers (Cogo op.cit.: 99).

The ‘processual turn’ in ELF reflects a general trend towards ‘an enhanced awareness of the contextual and interactional dimensions of language use’ (Canagarajah 2007: 924). However, some of Cogo’s statements regarding ELF suggest that there is a lingering tendency to see it as a distinct variety. According to Cogo (op.cit.: 103), it is ‘a natural language’, and students can choose to ‘speak ELF’ as an

alternative to speaking like native speakers (op.cit.: 104). Thus, ELF is still often defined in terms of how it differs from native-speaker varieties or ENL. Unfortunately, this has the effect of exaggerating such differences and ignores the great heterogeneity that exists within both ELF and native-speaker language use.

ELF versus ENL?

Elsewhere in the ELF literature, it is still common to find ELF promoted as a superior alternative to so-called native-speaker norms. In a state-of-the-art review, Jenkins et al. (op.cit.: 282) cite the Lingua Franca Core research of Jenkins (2000) as supporting the argument that ‘native English pronunciation is not optimum in ELF communication contexts’. But such dichotomies again obscure the realities of language variation. Fluent non-native speakers often use ‘native’ English pronunciation features, such as weak forms, that are elsewhere flagged as likely to ‘hinder intelligibility’ (ibid.: 147). And although some native speakers may indeed speak too rapidly or reduce vowels to vanishing point, these are not essential features of an invariant ‘ENL’. They are a result of the characteristics of native-speaker communities, and to suggest that they are uniquely associated with ‘native English’ (speakers or varieties) is to fall into the trap of essentialism.

In order to explain what I here call a non-essentialist view of language, an analogy with biological classification may be useful. Before the time of Darwin, and somewhat beyond, biological species were classified on the basis of the essential structural properties they seemed to possess. However, as Croft (2000: 13) explains, this essentialist view ran into difficulties when it was found that the members of a species could vary greatly among themselves, just as individual organisms might appear to be from the same species while actually belonging to distinct reproductive communities. The fact of evolutionary change also put paid to the essentialist position, as species could evolve and thereby lose their ‘essential’ structural properties (ibid.).

The essentialist view was replaced by the population theory of species, in which the reproductive isolation of a group of interbreeding individuals is what defines it as a species. The linguistic equivalent of a biological population is thus a speech community, defined in terms of actual or potential communicative interaction (Croft op.cit.: 19–20). I do not wish to explain this equivalence in detail here and will instead note two important implications of a non-essentialist view of languages and language varieties. First, and as mentioned above, in many cases it is problematic to argue for the distinctiveness of language varieties based on the occurrence of language features, partly because these are used variably within speech communities. ELF researchers such as Cogo now acknowledge this, although revealing a lingering affection for formal distinctiveness (for example, ‘the kinds of language forms and skills involved in the use of European ELF’; Cogo and Jenkins 2010: 271).

Second, and turning to skills, a non-essentialist viewpoint tends to discount claims that groups of speakers necessarily possess skills and attributes which distinguish them from other groups. Cogo and Jenkins (ibid.: 273) argue that ‘ELF speakers are more effective precisely because they speak other languages’ (emphasis in original). This argument, which recalls Jenkins’ (op.cit.) distinction between ‘MESS’ (monolingual English speakers) and ‘BESs’ (bilingual English speakers), is problematic for several reasons. Leaving aside the difficulties of yet another

dichotomous (monolingual/multilingual) distinction, a radical implication of a non-essentialist perspective is that because people belong to multiple speech communities and need to use multiple codes, ‘all individuals are to some degree multilingual’ (Croft op.cit.: 167). By the same token, being bilingual or multilingual does not necessarily confer intercultural competence. Despite the various advantages of bilingualism, it is possible to be bilingual and yet lack familiarity with cultures other than one’s own. To argue otherwise is to believe that cultural experience is inherent in language and that the mental experience of people who use a language is the same (Ashcroft 2009: 112).

ELF or not?

My argument here is thus that although ELF researchers have correctly identified the need to decentre linguistic and pedagogical conceptualizations of English, they appear to have retained much of the conceptual apparatus of the old order. In addition, the enlistment of metaphors such as ‘fluidity’ (Cogo op.cit.: 99) is a double-edged sword for ELF. While accurately capturing the transient, emergent nature of communication in today’s world, it simultaneously raises the question of whether the term ‘ELF’ can capture anything distinctive about language form or language use. If these are characterized as being fluid, then arguments that rely on boundedness (ELF versus non-ELF, or native speaker versus non-native speaker) must be approached with caution. Cogo’s examples of ‘what ELF speakers do’ (op.cit.: 99–102) are interesting illustrations of interaction between non-native speakers, but they do not support the implied argument of distinctiveness.

Extract 1 in Cogo’s article (op.cit.: 100) draws attention to utterance completions, latching, and backchannelling in ELF communication, but the literature on Conversation Analysis (CA) shows that these are commonly found and possibly obligatory features of conversation *in general*. Utterance completions are seen by Lerner (2004: 229) as being part of the ‘collaborative turn sequence’, which contributes to the local management and interactional achievement of conversation. Latching and backchannelling are also frequently mentioned in the CA literature. Extract 3 is used to show evidence of creativity and the co-construction of meaning, as the participants find multilingual alternatives for the informal English expression ‘cheesy’. Once again, many examples of ‘non-ELF’ interaction could be cited to show that conversation in general is creative and involves co-constructing meaning (see, for example, Cornbleet and Carter 2001: 85, where one of the subjects coins the term ‘Essexy’).

It may be the case that these phenomena are ‘particularly important in supporting ELF communication’ (Cogo op.cit.: 101) and that they are used in particular ways in such communication. However, it is important to appreciate that all language use – among whatever combination or grouping of native and non-native speakers – is situated, variable, and subject to hybridizing influences. As people increasingly belong to multiple communities, many of which are fractured in time and space, there seems to be little point in referring to ‘[t]he ELF community of speakers’ (Cogo op.cit.: 98). It is only if speakers themselves see ELF as a language for identification that it would make sense to talk of such a community. In such a case, the need to identify with other ELF speakers would overcome the constraints posed by (1) the transience of many ELF encounters and (2) the fact that people belong to many other communities in addition to the one partially defined by speaking ELF.

What should ELT professionals do?

Although the concept of ‘language’ is itself an abstraction, some kinds of abstraction are of course necessary aids to thinking. However, the tendency to reify ELF, and juxtapose it with an equally reified model of ENL, is a seemingly unavoidable aspect of ELF discourse. As outlined above, this oppositional stance tends to rely on overgeneralizations about both native and non-native speakers of English and their accompanying ‘varieties’. ELF involves a critical perspective on applied linguistics and therefore challenges ‘apolitical’ approaches towards the subject. Although this provides welcome illumination, there are noticeable shadows. Those encountering the debate must therefore exercise great care in treading upon what has become ideologically contested territory.

To illustrate this, I will return to the example of so-called ELF pronunciation. Continuing the essentialist theme, Cogo and Jenkins (op.cit.: 276) claim as follows: ELF speakers from a range of L1s regularly substitute voiceless and voiced ‘th’ with either /t/ and /d/ or /s/ and /z/. They also either vocalise dark ‘l’ so that the ‘l’ sound in the word ‘pull’ is pronounced as ‘w’ (hence ‘puw’), or they substitute it with clear ‘l’, which native English speakers only use when followed by a vowel sound.

There are several problems with this assertion. Although many ELF speakers do indeed use these substitutions, they are often used variably by individual speakers (for example for stylistic purposes). Many native English speakers also use substitutions for the ‘th’ sounds. The vocalization of dark ‘l’ is a longstanding tendency in English; it explains why the letter ‘l’ in ‘walk’ is silent. And speakers of, for example, Welsh English use clear ‘l’ after vowels, as noted by Jenkins herself (op.cit.: 139).

Again, according to Cogo and Jenkins (op.cit.: 276–7), it is ‘native English’ pronunciations that are ‘more likely to cause communication problems in ELF settings’. Despite the frequency with which this claim is made, there seems to be little more than anecdotal evidence for it. Given that there were no native speakers in Jenkins’ (op.cit.) study, it is difficult to understand how it can be so frequently cited in support of the ‘native speakers are less intelligible’ argument. As already mentioned, I do not wish to deny the argument, but rather to question both the grounds upon which it is made and the usefulness of such a comparison. One is forced to conclude that the ELF/ENL opposition functions as little more than ‘essentialised community politics’ (Spivak 1990, cited in Block 2007: 24). Although this may be an effective tactic in terms of raising awareness, Block (ibid.) concludes that it is ‘not a good strategy to adopt when working as a researcher, trying to construct understandings and explanations of social phenomena’. ELT professionals should, therefore, be wary of some of the claims and counterclaims that are emerging from the ELF debate.

Despite drawing from post-structural views of language when necessary, ELF appears to have retained a classical Marxist concept of ideology, as evidenced by Cogo’s claim that attitudes towards language are ‘still heavily influenced by ideology and identity’ (op.cit.: 103). Attitudes towards language are always affected by ideologies and identities. To assume that ideologies are only produced by dominant groups obscures the fact that counter-hegemonic discourses such as ELF also contain

ideologies, and underestimates creativity and agency by implying that learners are the passive victims of dominant ideologies. It also puts ELF in the hazardous position of 'claiming to reveal the truth by unmasking the obfuscatory workings of ideology' (Pennycook 2001: 108).

In many respects, ELF is closely aligned with much current thinking about language as a dynamic, emergent, and, above all, social phenomenon. The conservatism of language teaching is rightly challenged by Cogo (op.cit.: 104), who also makes a convincing case for seeing it as part of a wider process involving a range of skills, attitudes, and areas of knowledge. ELF represents a clear departure from structuralist linguistics and its influence on language teaching, for example, in the form of the structural syllabus; Hall (2011: 201) notes that 'many ELT coursebooks are still largely organized around structures'. Adopting an ELF perspective on teaching does not mean that norms and standards are no longer required, but that these are mutable concepts and that learners need to be introduced to language variation as soon as they are ready.

What should learners do?

A weakness of some approaches to ELF is that they tend to oversimplify the notion of learner choice and downplay the constraints posed by social structures and inequality. One reason why learners are often reluctant to abandon native-speaker models is that English is associated with the promise of social and spatial mobility (Blommaert 2010: 96). Models that are perceived to be 'reduced' in some way will be rejected for being unable to provide this mobility potential. There is no easy solution for learners, as there will necessarily be a 'local payoff of structure and agency, of determination and creativity' (ibid.: 101).

Although these requirements appear to be addressed by Cogo's (op.cit.: 104) claim that ELF is about 'awareness and choice', this seems to understate the difficulties of language learning. How many non-native speakers have the flexibility to 'choose to speak like native speakers when they want to' (op.cit.: 104)? While such a repertoire can only be desirable for some, obtaining it requires a high level of proficiency and involves exposure to many varieties of English, including those normally thought of as native-speaker varieties. Similarly, it is not clear from existing ELF research how far accommodation is possible for those speakers whose repertoire does not allow them 'to change their speech patterns to make themselves more easily understandable' (Cogo op.cit.: 99).

The message for learners seems to be that while ELF rightly emphasizes flexibility, maximizing this still requires the hard work of acquiring something resembling native-speaker competence. In addition to elucidating communicative strategies, ELF research may be able to help learners in this regard by identifying the features that are most important for international communication (as in the Lingua Franca Core developed by Jenkins op.cit.). This may not adequately address the social significance of language features, but it does free up time that can be used for more profitable learning activities.

A way forward?

The main contribution of the ELF debate may be to make us more aware of the need to problematize concepts such as ‘community’ and ‘language’, including ‘English’. Language teaching needs to move beyond a language-as-system view (as acknowledged by Cogo). Language teachers need to provide learners with critical awareness of language variation, at the appropriate stage, so that they are capable of entering into a variety of discourse communities. But such progress does not depend upon the construction of an idealized ELF, any more than upon the destruction of an ideologized ENL; part of the dynamic interplay between non-standard and standard language is that the former relies on its standard counterpart for visibility, for the construction of cultural difference (Ashcroft *op.cit.*: 112). As Larsen-Freeman and Cameron (2008: 226) observe, ‘if what is labeled ELF is indeed a set of stable and emergent patterns then they should continue to emerge if standard English continues to be taught’.

Returning to the question of whether it is possible to ‘speak ELF’, at conferences, I have heard speakers claiming to speak ELF, while using language forms that are all but indistinguishable from those of native speakers. Leaving aside the interesting questions of what ELF is, and who can, or cannot, speak it, it would be a desirable outcome if in future it were no longer necessary for speakers to make such assertions. It should be taken for granted that ‘speaking English’ is not associated with particular accents and will involve using other language features that do not conform to existing ideas of native-speaker models. It should also be clear that proficient speakers, in a twenty-first century definition of the term, are able to move between contexts and communities (Canagarajah *op.cit.*). Their use of language will change as they adapt to different environments and will thus make further untenable the idea of fixed norms of correctness.

But this does not mean that ‘anything goes’. The challenge for language teaching is to theorize and implement approaches that acknowledge the variability of language while still making it accessible and acceptable for actual contexts, classrooms, and learners. There needs to be an awareness of communicative processes, as well as products. Norms of some kind will still be required for teaching and learning, but these should not be adopted in an uncritical fashion. This, in turn, suggests that an interdisciplinary applied linguistics has an important role to play. In order to inform local practice, this must take account of social, historical, and cultural factors, as well as theorizing the local/global interaction. It is insufficient to note and tacitly accept local preferences for what are seen as native-speaker norms (for example ‘the Anglo-Saxon native-speaker model’ mentioned by Sowden *op.cit.*: 95) without examining the nature of these ‘norms’ and the ways in which attitudes towards them are shaped by political and economic factors, mediated by language ideologies.

Despite the inequalities that globalization in its current form appears to propagate, the local and transnational adaptation of English offers exciting and potentially liberating opportunities. Just as ‘post-colonial’ English writers are now firmly within the ‘inner circle’ of contemporary English literature, ideas of ‘English’ will continue to evolve as the language becomes increasingly decentred.

In this article, I have argued that during this evolutionary process, an artificially polarized debate between essentialized ‘varieties’ of language – native speaker and non-native speaker, or ELF and non-ELF – is likely to be counterproductive.

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Appendix C. 3

Academic Lexis and Disciplinary Practice: Corpus Evidence for Specificity

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ABSTRACT

The presence of unfamiliar words and expressions in academic texts is a serious obstacle to students reading in a second language. EAP has responded to this challenge by taking the view that there is a common core of academic vocabulary which is frequent across an academic register. This paper briefly considers this view by examining the range, frequency, collocation, and meaning of items on *the Academic Word List* (AWL) in a large multidisciplinary corpus. Our corpus analysis shows that individual lexical items on the list often occur and behave in different ways across disciplines and that words commonly contribute to ‘lexical bundles’ which also reflect disciplinary preferences. Our findings question the widely held assumption that there is a single core vocabulary needed for academic study and suggests that teachers should assist students towards developing a more restricted, disciplinary-based lexical repertoire.

KEYWORDS: Academic Word List, vocabulary, lexical bundles, disciplinary writing, specificity

I. READING AND ACADEMIC LEXIS

Reading in English is consistently shown to be of great concern to Non-Native English speaking students at tertiary level (e.g. Hyland, 1997; Littlewood & Liu, 1996) and understanding previously unencountered ‘technical’ vocabulary and ‘difficult words’ appears to cause the greatest trouble (Evans & Green, 2007). A key component of successful language learning is therefore control of the routine patterns of expression (Wray, 2000) and “semi-technical vocabulary” (Farrell, 1990) which students encounter in their disciplinary reading.

The response of materials writers and curriculum developers working in English for Academic Purposes (EAP) has largely involved ‘register targeting’ by seeking to identify lexical items which are reasonably frequent in a wide range of academic genres but are relatively uncommon in other kinds of texts (Coxhead & Nation, 2001). This vocabulary is seen as contributing an important element to an ‘academic style’ of writing and being ‘more advanced’ (Jordan, 1998) than the core 2,000 to 3,000 words that typically comprise around 80% of the words students are likely to encounter in reading English at university (Carter, 1998; Nation, 1990). Vocabulary, in other words, is typically seen as falling into three main groups (Nation, 2001):

1. High frequency words such as those included in West’s (1953) General Service List of the most widely useful 2,000 word families in English, providing coverage of about 80% of most texts.

2. An academic vocabulary of words which are reasonably frequent in academic writing and comprise some 8% to 10% of running words of academic texts.

3. A technical vocabulary which differs by subject area and covers up to 5% of texts.

First year undergraduate students are said to find academic vocabulary a particularly challenging aspect of their learning (Li & Pemberton, 1994) because, unlike technical vocabulary, it serves a largely supportive role and items are “not likely to be glossed by the content teacher” (Flowerdew, 1993: 236). Many of these words also occur too infrequently to allow incidental learning (Worthington & Nation, 1996), encouraging researchers and teachers to develop vocabulary lists for the direct teaching of these terms. Teachers have been assisted here by the findings of corpus-based inventories, the most widely used being the *Academic Word List* (AWL) (Coxhead, 2000; Coxhead & Nation, 2001). This contains 570 word families (the base word plus its inflected forms and transparent derivations) seen as essential for students irrespective of their chosen field of specialization. The 3,112 individual items in this inventory do not occur in West’s general service list and were fairly frequent in a corpus of 3.5 million words of academic genres and across a range of disciplines in the arts, commerce, law, and sciences (Coxhead, 2000:221).

There is no doubt that the AWL is an impressive undertaking, representing the most extensive investigation into core academic vocabulary to date and now widely used in teaching materials (e.g. Schmitt & Schmitt, 2005). It remains unclear, however, how far it can be said to represent the lexical composition of academic writing in English. The notion that some words occur more frequently in academic texts than in other domains is uncontroversial and seems to fit well with EAP’s distinctive approach to language teaching, based on identifying and teaching features specific to the particular disciplinary needs of learners. But while this general academic vocabulary might seem to offer good learning returns with less investment of time and effort, the view that students should be developing a general academic vocabulary is actually quite contentious.

It is by no means certain that there is a single literacy which university students need to acquire to participate in academic environments and we believe that a perspective which seeks to identify and teach such a vocabulary fails to engage with current conceptions of literacy and EAP, ignores important differences in the collocational and semantic behavior of words, and does not correspond with the ways language is actually used in academic writing. It is, in other words, an assumption which could seriously mislead students. In this paper we explore this view and offer some evidence for the disciplinary specific nature of lexis.

II. LEXICAL SPECIFICITY: EXPLORING THE AWL

To explore how effective the items on the AWL might be for students in different fields, we compiled a corpus of academic writing in eight disciplines representing the sciences, engineering, and the social sciences. The corpus comprised research articles, textbook chapters, science squibs, and academic book reviews which students might be expected to read at university as well as doctoral theses, masters dissertations and undergraduate project reports, 620 texts in all totaling 3.3 million words.

Using RANGE, a program developed by Nation (2002) and used to create the AWL, we found all 570 of the AWL word families occurred in our corpus, with 541 occurring in all three fields. The AWL covered 10.6% of the words in the corpus and provided an accumulative coverage of 85% when added to the 2,000 words of the General Service List, representing roughly one unknown word in every seven words of text (Hyland & Tse, 2007). But while the list offered a good *overall* coverage, items were not evenly distributed across the entire corpus. Students in the sciences, for example, are not well served by the list, suggesting that writing in the sciences demands a more specialized and technical vocabulary, but as we shall discuss below, the fact that all disciplines shape words for their own uses seriously undermines attempts to construct a 'core' academic vocabulary.

Defining items as *frequent* only if they occurred above the mean for all AWL items in the corpus (i.e. 597), we found only 192 families, or about a third of the AWL items, met this criteria. The research terms *process*, *analyze*, *research*, *data* and *method* were the most common while *commence*, *concurrent*, *levy* and *forthcoming* were among 23 extremely infrequent families, occurring less than 60 times in the corpus (below 10% of the overall mean). Moreover, it appears that some items are frequent overall because of their concentration in one or two fields. 15 of our top 50 items, for example, had over 70% of their occurrences in one field. Taking the means of individual fields as a benchmark, we found that of the 192 families which were frequent overall, only 82 were frequent in all three fields and 50 in just one. Nor were the same items the most frequent in all fields. Table 1 shows that only *analyze* and *process* of the overall most frequent items also occurred in the top ten most frequent families in each field.

Overall (3 Fields)	Engineering	Sciences	Social Sciences
Family Freq %	Family Freq %	Family Freq %	Family Freq %
Process 4501 1.3	Equate 1418	Data 1395 1.8	Research 3261 1.6
Analyze 4498 1.3	Process 1143	Method 1271 1.6	Strategy 2795 1.4
Research 3841 1.1	Design 999	Process 1118 1.4	Culture 2583 1.3
Data 3789 1.1	Method 920	Analyze 1029 1.3	Analyze 2574 1.3
Method 3214 0.9	Data 913	Concentrate 865 1.1	Process 2240 1.1
Vary 3156 0.9	Analyze 895	Require 848 1.1	Consume 1947 1.0
Strategy 3001 0.9	Function 847	Function 759 1.0	Response 1910 1.0
Culture 2962 0.9	Require 844	Obtain 750 1.0	Individual 1894 0.9
Function 2909 0.9	Output 839	Extract 739 0.9	Participate 1800 0.9
Significant 2742 0.8	Input 818	Similar 726 0.9	Significant 1762 0.9

Table 1. Most frequent items by field with percentages of families in that field

Distributions are also unequal when we looked at the least frequent words. Using 10% of the mean in each field as a reference, we found 78 families to be extremely infrequent in one field, 63 in two fields and 6 in all three. In other words, 27% of all the AWL families have a very low occurrence in at least one field and so have an extremely low chance of being encountered by students.

Comparing the occurrence of words relative to the mean helps to determine the relative significance of particular words in different fields, but a more accurate picture is obtained by norming frequencies to overcome variations in the sizes of sub-corpora. Theoretically, an even distribution would be about 33% of each item in each of the three fields, but no family met these criteria and over half of all items occurred mainly in one field only. Of the 570 AWL families, 534 (94%) have irregular distributions across the three fields with 40% of items having at least 60% of all instances in just one field. Among the most frequent items, over 90% of all cases of *participate*, *communicate*, *output*, *attitude*, *conflict*, *authority*, *perspective* and *simulate* occurred in one field. In fact, only 36 word families were relatively evenly distributed across the science, engineering and social science fields, and so might therefore qualify for an academic word list. Of these, however, only 22 might be considered as *frequent* by our criterion, and only seven were in the top 60 items. Just six families appeared in the top 60 of both Coxhead's list and our own: *analyze*, *consist*, *factor*, *indicate*, *period* and *structure*.

This concentration of items is also apparent when we look at distributions within fields. Table 2 shows 283 items in engineering (52% of all families) having over 65% of all cases in just one discipline, 244 items in the sciences (43%) with over 65% in just one discipline, and 128 (22.5%) of items in the social sciences with over 65% in one discipline. Overall, only one family occurred roughly equally across the three disciplines in the sciences and seven in the social sciences although engineering seems to be easier to identify a common semi-technical vocabulary with 47 items appearing equally across electrical and mechanical engineering.

Disciplines		Total Families	Total 40-64%	Total of all items occurring in one discipline	
				65-79%	Over 80%
Engineering	542		259(47.8%)	133(24.5%)	150 (27.7%)
Sciences	568		322(56.7%)	116(20.5%)	128 (22.5%)
Social Sciences	570		409(71.8%)	74(13.0%)	54 (9.5%)
Overall	570		336(59.0%)	110(19.4%)	114 (20.0%)

Table 2. Concentration of items in disciplines (% adjusted for corpus size)

Once again then, the patterns point to a more complex picture of language use in the disciplines than notions of a general academic vocabulary allow, pointing to more specialized language uses.

III. MEANINGS AND USES OF WORDS

There is a further difficulty with compiling a ‘common core’ of academic vocabulary as items also behave differently across disciplines. Most words have more than one sense yet students need to be confident that they are understanding words in the right way when reading academic texts. This means that a vocabulary list must either avoid items with clearly different meanings and dissimilar co-occurrence patterns, or these must be taught separately rather than as parts of families. We must, then, be cautious about claiming generality for families whose meanings and collocational environments may differ across each inflected and derived word form (Oakey, 2003).

Wang and Nation (2004) explored this possibility in the AWL and found only a small number of families which contained homographs, or unrelated meanings of the same written form and suggested that words have essentially similar meanings across fields. In our corpus, however, there were clear preferences for particular meanings and collocations in different disciplines. As brief examples, we might take the two most frequent AWL items in the corpus, *process* and *analyze*, both of which occur far more often in academic discourse than in other registers.

Despite its high frequency in all three fields, the word *process* is far more likely to be encountered as a noun by science and engineering students than by social scientists. This is the result of nominalization (Halliday, 1998), which refers to the way that writers in the sciences regularly transform experiences into abstractions to create new conceptual objects. Embedding an item such as *process* into complex abstract nominal groups produces terms such as:

- *A constant volume combustion process...*
- *the trouble call handling process...*
- *processing dependent saturation junction factors...*
- *the graphical process configuration editor...*

Such constructions allows writers to give new objects stable names and to manage the information flow in a text more efficiently, but they do not help novices to unpack specialized meanings from the individual lexical item. We believe this is therefore likely to present difficulties to both native and non-native English speaking students.

Similarly, *analyze* seems to be used differently across fields, occurring regularly as a noun in the social sciences but with engineering students six times more likely to come across the form *analytical*. There are also semantic differences. The word *analysis*, for instance, tends to be associated with particular types of approach, so that it appears in disciplinary specific compound nouns such as *genre analysis* or *neutron activation analysis*. The verb form also has field-specific meanings, with scientific uses referring to methods of determining the composition of a substance (1), while in the social sciences it has a sense closer to considering something carefully (2):

(1) In order to *analyze* the activity of the somatostatin promoter in DTC1 cells after integrating into the host chromosome, two pools of DTC1 stable transfectants (Bio PhD)

We analyze the MSHG image of two neighboring domains and two parts A and B of a domain wall ... (Phy RA)

(2) That opportunity lies about 10 years into the future for this sample, when we can analyze cumulative conviction records from age 14 to age 30 to span the desistance process ... (Socio RA)

This paper attempts to analyze whether the currency attack on Hong Kong dollar since the outbreak of Asian financial crisis was ... (Bus MA)

In fact, analysis of potential homographs in the AWL reveals a considerable amount of semantic variation across fields. Table 3 shows the main meanings for selected words with different overall frequencies in the AWL together with their distributions.

The table shows that even where items are very frequent, there are still wide variations in preferred uses, with social science students far more likely to meet *consist* as meaning 'to stay the same' and science and engineering students very unlikely to come across *volume* as a book. With less frequent words the preferred meanings differ dramatically. More worrying, these preferred uses become even more apparent when we consider patterns at the disciplinary level (Hyland & Tse, 2007).

Family	meaning	Science	Engineering	Social Science
Consist (rank 41) Issue (46)	stay the same made up of flow out topic	34 66 7 93	15 75 6 94	55 45 18 82
Attribute (93)	feature ascribe to	83 17	35 65	60 40
Volume (148)	book quantity	1 99	7 93	50 50
Generation (245)	growth stage Create	2 98	2 98	36 64
Credit (320)	acknowledge payment	0 100	60 40	52 48
Abstract (461)	précis/extract Theoretical	76 14	100 0	13 87
offset (547)	counter out of line	0 100	14 86	100 0

Table 3. Distribution of meanings of selected AWL word families across fields (%)

The fact that words take on additional meanings as a result of their regular co-occurrence with other items may also create difficulties for learners working from a general academic wordlist. The term *value* in computer science, for instance, is often found as *value stream* (21% of all cases) and *multiple-value attribute mapping* (7% of all cases). Even high frequency items such as *strategy* have preferred associations with *marketing strategy* forming 11% of all cases in business, *learning strategy* making up 9% of cases in applied linguistics, and *coping strategy* comprising 31% of cases in sociology.

In sum, these different word choices, collocates and fixed phrases colour the everyday uses of words with more particular discipline-specific meanings, reflecting how writers need to represent themselves and their ideas through a locally appropriate theoretical and methodological framework.

IV. DISCIPLINARY SPECIFIC BUNDLES

The disciplinary specific patterns we have found in the uses of individual words are also apparent in the distribution of ‘lexical bundles’, or strings of words which follow each other more frequently than expected by chance. Such stable word combinations are an important part of a discipline’s discursive resources but enormously complicate the business of constructing general word lists. By breaking into single words items which may be better learnt as wholes, vocabulary lists simultaneously misrepresent disciplinary specific meanings and mislead students.

Bundles, in fact, are familiar to writers and readers who regularly participate in a particular discourse. The very ‘naturalness’ of extended collocations like as a result of, it should be noted that, and as can be seen, for example, signal competent participation in an academic register and (Biber, 2006; Biber, Conrad & Cortes, 2004; Scott & Tribble, 2006). Wray and Perkins (2000), for instance, argue that such sequences function as processing short-cuts by being stored and retrieved whole from memory at the time of use rather than generated anew on each occasion. Text receivers are therefore able to sort out what is natural from what is merely grammatical and judge whether a particular collocation ‘sounds right’ in that context. In fact, it is often a failure to use native-like formulaic sequences which identifies students as outsiders and there is a general consensus that formulaic sequences are difficult for L2 learners to acquire (e.g. Yorio, 1989).

All this has led Sinclair (1991) and Hoey (2005) to propose that lexis is systematically structured through repeated patterns of use, rather than simply filling the slots which grammar make available for it. As Sinclair (1991, p. 108) observes:

By far the majority of text is made of the occurrence of common words in common patterns, or in slight variants of those common patterns. Most everyday words do not have an independent meaning, or meanings, but are components of a rich repertoire of multi-word patterns that make up a text.

In other words, grammar is the output of repeated collocational groupings. Sentences are typically made up of interlocking bundles as everything we know about a word is a result of our routine encounters with it, so that when we formulate what we

want to say, the wordings we choose are shaped by the way we regularly find them in similar texts. In academic contexts this means that bundles not only help identify communicative practices in particular disciplines, but help define the disciplinary texts themselves.

Examining a 3.5 million word corpus of research articles, PhD theses and Masters dissertations in four disciplines, the first author found 240 different 4-word bundles, totalling nearly 16,000 individual cases (Hyland, 2008). *On the other hand* was by far the most frequent of these, occurring about 200 times per million words, and was over twice as common as the next placed bundles, *at the same time* and *in the case of*. There was, however, considerable variation in disciplinary preferences, with Electrical engineering containing the greatest range of different 4-word bundles and Biology the fewest. This greater reliance on prefabricated structures could be a consequence of the relatively abstract and graphical nature of technical communication where arguments are often based on findings presented in visual form with formulaic links between them.

There were also considerable differences in the 4-word bundles themselves across disciplines. Table 4 shows the fifty most commonly used bundles in the four fields in frequency order, with items occurring in all four disciplines marked in bold and those occurring in three disciplines shaded.

Biology	Electrical Eng	Applied Ling	Business Studies
in the presence of	on the other hand	on the other hand	on the other hand
in the present study	as shown in figure	at the same time	in the case of
on the other hand	in the case of	in terms of the	at the same time
the end of the	is shown in figure	on the basis of	at the end of
is one of the	it can be seen	in relation to the	on the basis of
at the end of	as shown in fig	in the case of	as well as the
it was found that	is shown in fig	in the present study	the extent to which
at the beginning of	can be seen that	the end of the	at the end of the
as well as the	can be used to	the nature of the	significantly different
as a result of	the performance of the	in the form of	from zero
it is possible that	as a function of	as well as the	are more likely to
are shown in figure	is based on the	at the end of	the relationship
was found to be	with respect to the	the fact that the	between the
be due to the	is given by equation	in the context of	the results of the
in the case of	the effect of the	is one of the	the hang seng
is shown in figure	the magnitude of the	in the process of	index
the beginning of the	at the same time	the results of the	on the other hand
the nature of the	in this case the	in terms of their	the
the fact that the	it is found that	to the fact that	in the context of
may be due to	the size of the	in the sense that	as a result of
are summarized in table	be seen that the	the relationship	the performance of
has been shown to	the accuracy of the	between	the
an important role in	as well as the	the	hong kong stock
at room temperature for	the same as the	of the hong kong	market
at the same time	is one of the	at the beginning of	is positively related
can be used to	a function of the	the role of the	to
in the absence of	as a result the	of the present study	are significantly
as shown in figure	the results of the	as a result of	different from

with respect to the used in this study was added to the a result of the in addition to the the quality of the are listed in table is due to the the presence of a the results of the was found in the were found to be a wide range of the effect of the in the presence of the to the presence of was used as a as a result the have been shown to in this study the is possible that the the base of the	in the form of is assumed to be of the power system it is necessary to it is possible to the length of the are shown in fig can be obtained by in terms of the are shown in figure is due to the the structure of the is defined as the it was found that on the other hand the the presence of the with the use of is the same as it can be observed it is because the than that of the will be discussed in	one of the most can be seen as it is important to it should be noted on the one hand can be found in the ways in which in other words the on the other hand the the starting point of be seen as a in the eyes of the beginning of the should be noted that that there is a at the level of for the purpose of in hong kong and are more likely to the meaning of the on the part of the purpose of the a wide range of the use of the	in terms of the the degree to which in the long run in the united states the nature of the the total number of the size of the in the number of it is important to the standard deviation of in the hong kong with respect to the of the number of in the form of the difference between the by the end of the effect of the is consistent with the the quality of the as a result the can be used to in addition to the standard deviation of the the fact that the in the presence of we assume that the is more likely to the efficiency of the the price of the a wide range of
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Table 4. Most frequent 50 4-word bundles in four disciplines (Hyland, 2008)

It can be seen that over half the items in each list do not occur at all in any other discipline and only 30% of the strings in each discipline are found in two other fields. The discipline-specificity of these preferences for 4-word bundles is illustrated by the bold and shaded items, with only five bundles shared across all four disciplines and just 14 bundles occurring in three disciplines. Electronic engineering and Applied Linguistics shared just nine bundles, for example. The best candidate bundles for a general list are *on the other hand*, *in the case of*, *as well as the*, and *the end of the*, all of which occur in the top band of bundles in at least three disciplines and so comprise bundles with high frequencies across fields.

Unsurprisingly, the greatest similarities are between broadly cognate fields. Business Studies and Applied Linguistics share 18 items and Biology and Electrical Engineering have 16 bundles in common with *it was found that*, *is shown in figure*, *as shown in figure*, *is due to the*, and *the presence of the* not found in the social science

lists. The contrasts between these two short lists reflect something of the argument patterns in the two domains, with those in the first group largely connecting aspects of argument and those in the second group avoiding authorial presence while pointing to graphs and findings. It is worth noting that while there were no bundles referring to tables or figures in the applied linguistics corpus and only two in the business texts, both science lists included these as among their most frequent strings.

V. THE FUNCTIONS OF BUNDLES

While it is useful to consider the lexical composition of formulaic strings, understanding their functional distributions is a key way in which teachers can help their students with reading assignments. The bundles in this corpus can be classified into the three categories of research, text and participants (Hyland, 2008):

Research-oriented - help writers to structure their activities and experiences of the real world.

- **Location** - indicating time/place (*at the start of, at the same time, in the present study*)
- **procedure** (*the use of the, the role of the, the purpose of the, the operation of the*)
- **quantification** (*the magnitude of the, a wide range of, one of the most*)
- **description** (*the structure of the, the size of the, the surface of the*)
- **topic** - related to the field of research (*in the Hong Kong, the currency board system*).

Text-oriented – concerned with the organisation of the text and its meaning as a message or argument.

- **transition signals** – establishing additive or contrastive links between elements (*on the other hand, in addition to the, in contrast to the*)
- **resultative signals** – mark inferential or causative relations between elements (*as a result of, it was found that, these results suggest that*)
- **structuring signals** – text-reflexive markers which organise stretches of discourse or direct reader elsewhere in text (*in the present study, in the next section, as shown in fig.*)
- **framing signals** - situate arguments by specifying limiting conditions (*in the case of, with respect to the, on the basis of, in the presence of, with the exception of*)

Participant-oriented – these are focused on the writer or reader of the text (Hyland, 2005).

- **stance features** – convey the writer's attitudes and evaluations (*are likely to be, may be due to, it is possible that*)
- **engagement features** - address readers directly (*it should be noted, as can be seen*)

VI. DISTRIBUTION OF BUNDLE FUNCTIONS

Analysing the corpus reveals substantial disciplinary differences, pointing to variations in what writers are attempting to achieve through their linguistic choices. Table 5 indicates the principal differences.

Discipline	Research-oriented	Text- oriented	Participant-oriented	Totals
Biology	48.1	43.5	8.4	100
Electrical Eng	49.4	40.4	9.2	100
Applied Linguistics	31.2	49.5	18.6	100
Business Studies	36.0	48.4	16.6	100
Overall	41.2	45.5	13.2	100

Table 5: Distribution of bundle functions by discipline (%)

One obvious difference is the heavier use of research-oriented bundles in the science and engineering texts, a preference which amounted to almost half of all bundles in the science/technology corpora. The overall effect of this use is to convey a greater real-world, laboratory-focused sense to writing in the hard sciences which, in turn, plays an important role in conveying the grounded, experimental basis of research in the hard sciences. While many of these bundles specify models, equipment, materials or aspects of the research environment (3), almost half of all cases depicted research procedures, showing the ways that experiments and research were conducted (4):

(3) the input terminal of the operational amplifier is determined by the potentiometer setting of the resistor R2 Which thus controls *the slope of the* segment that is being simulated. (EE RA)

The depth of the leaf litter layer at the base *of the* reedbeds was measured by a meter rule (0-30cm) ... (Bio MSc)

(4) A programmable gain amplifier *can be used* to improved the dynamic range of the inputs ... (EE RA)

Then sample buffer was *added to the* pellet which was boiled for 10 minutes followed by transfer of the sample buffer-protein... (Bio MSc)

New knowledge in these disciplines is presented and accepted on the basis of empirical demonstration designed to test hypotheses related to gaps in knowledge. The rhetorical conventions of the field, help contribute to this epistemological framework and the presence of these patterns of 4-word bundles is likely to be a key feature for students reading in the sciences.

The Applied Linguistics and Business Studies corpora, in contrast, were dominated by text-oriented strings reflecting the more discursive and evaluative patterns of argument in the soft knowledge fields. Here persuasion is more explicitly interpretative and knowledge is typically constructed as plausible reasoning rather than as nature speaking directly through experimental findings. The presentation of research is therefore more discursive, and text-oriented bundles are heavily used to provide familiar and shorthand ways of engaging with a literature, providing warrants, connecting ideas, directing readers around the text, and specifying limitations (Hyland, 2004). About half of the text-oriented bundles in the social science texts were used to frame arguments by highlighting connections, specifying cases and pointing to limitations:

(5) *In the case of* staged financing, the problem involves double moral hazard in that the EN is inclined to shirk and the va may terminate projects too early ... (BS RA)

Most institutional talk, as will be explored later, is goal-oriented *in the sense that* the participants' behaviour is highly contingent upon their relevant identities in an institution ... (AL RA)

The next most frequent group of text-oriented bundles were structuring signals, mainly used to help organise the text by providing a frame within which new arguments can be both anchored, announcing discourse goals and referring to text stages:

(6) It is *the purpose of this chapter* to highlight some important aspects of post-allocation trading and contrast them with the conventional viewpoint. (Bus MA)
In this section we offer evidence on the effect of corporate investment decisions on the market value of the firm. (Bus MA)

These bundles help scaffold and present arguments by considering the discursal expectations and processing needs of a disciplinary audience.

Finally, participant bundles convey two main kinds of meaning: stance and engagement, referring to writer- and reader-focused features of the discourse respectively (Hyland, 2005). While *stance* concerns the ways writers convey epistemic and affective judgements, evaluations and degrees of commitment to what they say, *engagement* refers to writers' efforts to actively address readers as participants in the unfolding discourse.

Two thirds of all participant-oriented bundles indicated the writer's stance, and the vast majority of these were in the social science texts where personal interpretations play a far greater part in creating a convincing discourse. Most examples, in fact, express the reluctance of writers to express complete commitment to a proposition, hedging information to present it as an opinion rather than fact:

(7) *It may be due to* the fact that vocabulary teaching has never received serious attention as one of the major concerns ... (AL PhD)
 ...but *it is possible that* less likely outcomes (in terms of prior probability) could have a different effect on post-choice valuation ... (BS RA)

We also find these bundles expressing caution impersonally, largely through modals, epistemic adverbs and anticipatory-it patterns.

While stance bundles occurred mainly in the social science corpora, engagement bundles are largely found in hard sciences papers. These were almost all directives (Hyland, 2002), bundles which instruct readers to perform an action or to see things in a way determined by the writer. Here the writer pulls readers into the discourse to guide them to particular interpretations, typically by the use of a modal of obligation or a predicative adjective expressing the writer's judgement of necessity/importance:

(8) We conclude that, in studies on freezing-induced embolism among chaparral shrubs, *it is important to* consider the hydration of the plant ... (Bio RA)
 ... but *it should be noted that* in a process allowing both P and N devices to be fabricated in a well... (EE RA)

So these bundles act to position readers, requiring them to notice something in the text and thereby leading them to a particular interpretation. Their substantial presence in the hard science texts partly reflects a desire to ensure the accurate understanding of procedures and results. It also, however, represents a reluctance to adopt a more intrusive personal voice through stance options, a rhetorical choice which reduces the writer's role as interpreter and allows research to be presented as independent of any particular scientist.

VII. CONCLUSIONS AND IMPLICATIONS

In this paper we have presented corpus evidence for disciplinary variation in academic lexis, pointing to the limitations of the AWL as a general academic resource and offering a picture of academic reading and writing which emphasises the importance of disciplinary specific 4-word bundles. The different distributions of the frequency of forms and functions across disciplines helps, we believe to show something of the ways that disciplines draw on different resources to develop their arguments, establish their credibility and persuade their readers.

These findings have clear implications for EAP practitioners. Not only do they reinforce the calls by Nattinger and DeCarrico (1992), Willis (2003) and others for an increased pedagogical focus on bundles, but they also help undermine the widely held assumption that there is a single core vocabulary needed for academic study. Both individual lexical items and bundles occur and behave in dissimilar ways in different disciplinary environments and it is important that EAP materials writers and teachers recognise this, with the most appropriate starting point for instruction being the student's specific target context. In other words, we agree completely with the pedagogical principles that lay behind the AWL: that teachers should seek to teach the most relevant and useful vocabulary to their students and that corpus analyses are the best way of ascertaining this (Coxhead, 2002). Where we diverge, however, is on the nature of this vocabulary.

Numerous studies now show the extent to which language features are specific to particular disciplines, and that the best way to prepare students for their studies is not to search for universally appropriate teaching items, but to provide them with an understanding of the features of the discourses they will encounter in their particular courses. Acquisition clearly needs to be part of a well-planned and sequenced program, with a mix of explicit teaching and incidental learning, a range of activities which focus on elaboration and consolidation, and sufficient contextual and definitional information. This means, for example, encouraging learners to notice these items and multi-word units through repeated exposure and through activities such as matching and item identification. Consciousness raising tasks which offer opportunities to retrieve, use and manipulate items can be productive, as can activities which require learners to produce the items in their extended writing.

In sum, because academic knowledge is embedded in processes of argument and consensus-making it will always be particular to specific disciplines and their agreed ways of discussing problems. The fact that writing actually helps to create disciplines, rather than being just another aspect of what goes on in them, is a serious challenge to identifying overarching uniformities and encourages us to focus on what is specific in the texts our students will need to read [].

Appendix C. 4

On the Use of *As If*, *As Though*, and *Like* in Present-Day English Complementation Structures

María José López-Couso and Belén Méndez-Naya

Abstract

This investigation is part of the authors' larger research project on so-called minor declarative complementizers in the history of English, that is, connectives recruited mostly in the adverbial domain that are occasionally used in complementation. The present study sheds light on the complementizer use of the three originally comparative links *as if*, *as though*, and *like* in Present-Day English complement structures. In the theoretical part of the article, the authors argue for the complement analysis of certain clauses depending on *as if*, *as though*, and *like* (e.g., *It seemed as if the strange little man had never been there*). The empirical part of the study analyzes data drawn from the Brown family of corpora (LOB, Brown, FLOB, and Frown), the Diachronic Corpus of Present-day Spoken English (DCPSE), and the Toronto English Archive (TEA), which are representative of both written and spoken language at different time periods (1960s, 1990s, and early 2000s) and in different varieties of English (British English, American English, and Canadian English). Taking the corpus data as a starting point, and with the aim of revealing what ongoing change is observable in the contemporary language, the authors attend to the following issues: (a) the predicates and construction types associated with these minor links, (b) the factors determining the variation between the three comparative complementizers, and (c) the variation between *as if*, *as though*, and *like* and the default declarative complementizer *that*.

Keywords: complementation, complementizer, comparative subordinator, variation, corpus, Present-Day English

The variation between the two major links introducing finite declarative complement clauses, *that* and zero, has received considerable attention in the literature on complementation, both for Present-Day English (PDE) and for earlier stages of the language (see, among others, Elness 1982, 1984; Warner 1982; Fanego 1990; Rissanen 1991; Finegan & Biber 1995; López-Couso 1996b; Tagliamonte & Smith 2005; Kaltenböck 2006; Kearns 2007; Torres Cacoullos & Walker 2008). However, connectives normally associated with other types of subordinate clauses but that are occasionally used in complementation structures (e.g., *as if*) have so far not received systematic investigation. The research reported in this article is part of a larger project that aims to study the origin, development, and current use of these minor declarative complementizers (López-Couso 2007; López-Couso & Méndez-Naya 1998, 2001, forthcoming). In particular, the present article is concerned with the complementizer use in PDE of the three originally comparative subordinators *as if*, *as though*, and *like* in sequences of the type *It seems as if/as though/like it's going to rain* or *He looks as if he were older*.

The article has a theoretical and a data-based component. In the theoretical part we first address the use of *as if*, *as though*, and *like* in adverbial subordination (e.g., *He talks as if he had a potato in his mouth*) and then provide a number of criteria that favor the complement analysis for the subclause in structures such as *It looks as if it's going to rain*, in which the clause introduced by *as if* conveys a semantic argument of a propositional attitude predicate. In the empirical part, which is based on data from a range of written and spoken corpora representative of different varieties of contemporary English, we examine (a) the predicates and construction-types associated with *as if*, *as though*, and *like* in complementation; (b) the variation between these three minor links, paying attention to different types of structural, textual, and dialectal factors that may determine their choice; and (c) the variation between these connectives originating in the comparative domain and the default declarative complementizer *that*. This corpus analysis aims to reveal what ongoing change is observable in the contemporary language. Finally, the article closes with a summary of our main findings.

The data for the present study have been drawn from the Brown family of corpora (LOB, Brown, FLOB, and Frown; Hofland et al. 1999), the Diachronic Corpus of Present-day Spoken English (DCPSE; Aarts & Wallis 2006), and the Toronto English Archive (TEA; Tagliamonte 2003–6, 2006).

As If, As Though, and Like in Adverbial and Complementation Constructions

In PDE the subordinators *as if*, *as though*, and *like* are normally associated with adverbial clauses of Comparison¹, as in examples (1)–(3) (see Quirk et al. 1985:1110–1111; Biber et al. 1999:844; Huddleston & Pullum 2002:1151–1154, 1158). In addition, *like* can also introduce adverbial clauses of Similarity, as in (4)².

(1) He talks as if he has a potato in his mouth. (from Quirk et al. 1985:1110)

(2) The bird was careening from side to side as though there were waves.

(OED s.v. *careen* v.)

(3) They look at me like I'm dirt. (OED s.v. *like* a., adv. [conj.] and n.² B.6.e)

(4) His successors can build their modest, unpretentious monuments, like the British have been doing for years. (OED s.v. *like* a., adv. [conj.] and n.² B.6.a)

In Kortmann's (1997) typological study of adverbial subordinators in European languages, Comparison and Similarity are identified as two of the thirty-two interclausal relations into which the adverbial semantic space can be divided. More specifically, they belong to the group of Modal relations, which also includes Manner, Comment/Accord, Instrument/Means, and Proportion, that is, those relations associated with the "tightly interconnected network of manner relations in the widest sense" (Kortmann 1997:84)³.

The semantic affinity between Comparison and Similarity, and between these two relations and other members of the Modal domain, is evident. Example (1) above illustrates how the proposition in adverbial clauses of this kind answers 'how' questions ('how does he talk?'). Moreover, Comparison involves Similarity, the similarity relation expressed by the adverbial clause being typically hypothetical (Kortmann 1997:195): he talks as if he has a potato in his mouth, but does not have one. The close connection between Comparison and Similarity would explain why some subordinators, as is the case of *like* (and *as*), can signal both semantic relations.

Comparison and Similarity qualify as cognitively complex relations that stand at the extended core of adverbial relations (Kortmann 1997:144, 158). In Kortmann's (1997:159) view, the cognitive complexity of the conceptual space of Comparison may go a long way toward explaining why only a few languages make use of monomorphemic subordinators for this semantic domain. English mostly uses "complex subordinators combining an element of Similarity (*as*) with an element indicating hypotheticality (*if*, *though*), yielding *as if* and *as though*" (Kortmann 1997:318), although monomorphemic connectives (such as *like*) are also found.

In addition to the basic adverbial use of *as if*, *as though*, and *like* just described, these subordinators can occasionally be found in complementation structures introducing finite declarative clauses, such as those in (5)–(7). Structures of this kind are the concern of the present investigation.

(5) ... and as time passed it seemed *as if the strange little man had never been there* (Brown PL23)

(6) It seemed *as though she were always auditioning*. (Brown F09)

(7) 'cause some people seem *like they're older* ... (TEA sneville)

Although at first glance the *as if*, *as though*, and *like* clauses in these examples may have the appearance of adverbial clauses of Comparison, similar to those in (1)–(3) above, they nevertheless fulfill a number of structural and semantic criteria that show that the complement analysis for the clauses at issue is preferable.

The most relevant of these criteria is the fact that, in contrast to the adverbial clauses in (1)–(4) above, the italicized clauses in (5)–(7) convey the argument of a semantic predicate (*seem*). The occurrence of these clauses therefore requires the presence of a predicate of a specific class "that licenses them" (Huddleston & Pullum 2002:219). When occurring with the appropriate predicates, the *as if*, *as though*, and *like* clauses are obligatory constituents in clause structure and cannot be omitted without affecting the grammaticality of the sequence, as shown in (5a). They thus show a higher degree of integration into the matrix than adverbial clauses, which can easily be left out, as illustrated in example (2a).

(5a) *and as time passed it seemed.

(2a) The bird was careening from side to side.

The analysis of *as if/as though/like* clauses as complements thus heavily hinges on the occurrence of a particular licensing predicate and on whether the argument structure of this complement-taking predicate is already saturated or not. If the argument structure of the predicate is satisfied by another element in the clause, then the adverbial reading is triggered (also see Bender & Flickinger 1999:13). This is what happens in example (8a), where the predicate *look* co-occurs with both an Adjective Phrase in predicative complement function, *shrivel'd and old*, and a comparative clause introduced by *as though*. Notice, however, that if *shrivel'd and old* is omitted, as in (8b), the argument structure of the predicate *look* would be completed by the *as though* clause, which would no longer qualify as an adverbial clause in the resulting sequence, but rather as a complement according to the criterion of obligatoriness.

(8a) Pregnant women addicted to this spirit often gave birth to weak, sickly children who looked "shrivel'd and old as though they had numbered many years." (FLOB G16)

(8b) Pregnant women addicted to this spirit often gave birth to weak, sickly children who looked as though they had numbered many years.

Further support for the complement analysis of the clauses at issue comes from the fact that they can be replaced by unambiguous declarative complement clauses, either finite or non-finite. Thus, for example, the *that* clause in (5b) can substitute for the *as if* clause in our earlier instance (5), “without any perceptible change of meaning” (Huddleston & Pullum 2002:962; also see Quirk et al. 1985:1175 note a, 1184 note b). Similarly, the infinitival construction in (7a) is an alternative for the *as if* clause in example (7). In other words, the clauses in (5)–(7) are semantically equivalent to declarative complements.

(5b) and as time passed it seemed that the strange little man had never been there.

(7a) 'cause some people seem to be older.

Additional evidence in this connection is found in examples like (9), where the *as if* clause, complement to the predicate *look*, is resumed by a *that* clause after the insertion of intervening material.

(9) “I tell you I can’t believe it. It’s—it’s not right. It looks as though you’ve, well, that you’ve forgotten Dad.” (FLOB N25)

Coordination with prototypical complements, either phrasal or clausal, may also be taken as indicative of the complement status of the clauses under analysis. Examples (10) and (11) show two clausal complements linked by means of coordination, an *as if* clause and a *that* clause in the former, and a *like* clause and a *that* clause in the latter.

(10) Now, driving the horse and sulky borrowed from Mynheer Schuyler, he felt as if every bone was topped by burning oil and that every muscle was ready to dissolve into jelly and leave his big body helpless and unable to move. (Brown K14)

(11) Do you feel like your neighbors care about you or that you have any sense of community that way? (TEA dbarrett)

In examples (12) and (13), coordination is established between an Adjective Phrase (*nervous* and *grave*, respectively) and an *as if* clause, both of them in predicative complement function. Struck through words in example (12) appear that way in the corpus.

(12) I think you’re doing fine. You’re not . . . seeming nervous or as if you need encouragement to me. Do you think you need encouragement?

(DCPSE: DI-A16)

(13) Even Perry looked grave and as if he were to blame, stricken with compunction, possibly for the first time in a century. (FLOB K10)

Another possible criterion for distinguishing between adverbial clauses and complement clauses introduced by the subordinator *as if* is mobility, as proposed by McCawley (1988:143) and Bender and Flickinger (1999). Thus, whereas the adverbial *as if* clause in example (14) can be placed in sentence-initial position, the fronting of the *as if* clause in our earlier example (5) yields an ungrammatical construction, as shown in (5c). Notice that the preverbal position of the subclause is here ruled out because the clause is a complement of the verb *seem* and complements of *seem* can only occur in extraposition. This is one more respect in which the *as if* clause in (5) clearly aligns with *that* complements, as shown in example (5d).

(14) As if he suddenly felt her studying him, he turned and looked down at her.
(Frown SP10)

(5c) *As if the strange little man had never been there seemed.

(5d) *That the strange little man had never been there seemed.

Finally, a further criterion for complementhood has been proposed by McCawley (1988:143), namely pronominalization. Note that the *as if* clause in (5) would pronominalize as (5e), in exactly the same way as its *that* clause counterpart in (5b).

(5e) It seemed so.

The complementizer use of *as if*, *as though*, and *like* just discussed has received very little attention in reference grammars of PDE and in the literature on complementation, with Bender and Flickinger (1999) and Rooryck (2000) as notable exceptions. This neglect may be attributed, at least in part, to the strong association of these links with adverbial subordination. Passing mention to *as if* and *as though* in complement structures can nevertheless be found in Quirk et al. (1985:1175), McCawley (1988:143), Dirven (1989:134), Huddleston and Pullum (2002:962, 1151-1152), Dancygier and Sweetser (2005:229-230), and Taylor and Pang (2008:130). The use of *like* in complementation is also recognized in Huddleston and Pullum (2002:608n1, 1158)⁴ and in Quirk et al. (1985:1175), where it is mentioned that after verbs such as *seem*, *appear*, *look*, *sound*, *feel*, *smell*, and *taste*, in addition to *as if* and *as though* clauses, “one also frequently hears clauses introduced by *like*, but these are often regarded as nonstandard: *It seems like the weather is improving.*”

Of the two uses of *as if*, *as though*, and *like* discussed in the present section, the adverbial use is not only the basic one, but also the earliest to be recorded in the historical data. The combinations *as if* and *as though* date back to the thirteenth century (see Visser 1963–73:923-924, López-Couso & Méndez-Naya, forthcoming). The conjunctive use of *like* is first found in the fifteenth century in clauses of Similarity (Middle English Dictionary s.v. *lik(e) conj.*), and the comparative meaning ‘as if’ is an Early Modern English development (see OED s.v. *like* a., adv. [conj.] and n.², B.6.e). Despite its long history, though, the conjunction *like* remained infrequent until the Late Modern English period. It was only in the nineteenth century that it started to be noticed and rebuked by prescriptive grammarians, a stigmatization that continues to the present day⁵. Quirk et al. (1985:1110; also 558, 662, 998, 1033) and Kortmann (1997:371n159) characterize conjunctive *like* as typical of informal style and as especially common in American English. Huddleston and Pullum (2002:1158) also refer to the “quite strong tradition of prescriptive opposition”: it is alleged that *like* requires a Noun Phrase complement and cannot take a finite clause. Nevertheless, it is also stated in this grammar, published some twenty years later than Quirk et al.’s, that speakers who avoid the use of *like* as a conjunction are “very much in the minority,” both in British and especially in American English. In the former variety, this use of *like* is mostly restricted to informal style; in American English, though closely associated with informality, *like* is trickling into more formal registers.

The complementizer use of the comparative links under analysis develops later than their use in adverbial subordination: *as though* is first found in the Late Middle English period, while we have been able to trace the first instances of complementizer

as if to Early Modern English (López-Couso & Méndez-Naya, forthcoming; also see Bender & Flickinger 1999:12 for *as if*). The complementizer use of *like* emerges much later: the earliest examples given in the OED entry for *like* (s.v. *like* a. adv. [conj.] and n², B.6.e) are found in Faulkner's writings and are dated 1940. Mark Davies's Corpus of Historical American English (COHA), however, yields examples of the complementizer *like* from the first half of the nineteenth century onward.

Table 1. The Corpora

Corpus	Variety	Medium	Date	No. of words
LOB	British	Written	1960s	1,000,000
FLOB	British	Written	1990s	1,000,000
DCPSE-LLC	British	Spoken	1960s	400,000
DCPSE-ICE-GB	British	Spoken	1990s	400,000
Brown	American	Written	1960s	1,000,000
Frown	American	Written	1990s	1,000,000
TEA	Canadian	Spoken	Early 2000s	1,800,000

examples of the complementizer *like* from the first half of the nineteenth century onward.

Corpora

As mentioned in the introduction, our aim in this article is to examine the behavior of *as if*, *as though*, and *like* as declarative complementizers in PDE, paying special attention to the distinction between the spoken and the written media, different text types, and different national varieties. For this purpose we have selected the following corpora:

a. The Brown family: LOB, FLOB, Brown, Frown, one million words each, illustrating written British and American English of the 1960s and 1990s and containing texts representing different degrees of formality⁶.

b. The DCPSE, which samples spoken English used by British adults in the 1960s (400,000 words from the London-Lund corpus) and 1990s (400,000 words from the ICE-GB).

c. The TEA, which records 1,800,000 words of informal conversations with people born and raised in the city of Toronto (Ontario, Canada) in the early 2000s (Tagliamonte 2003–6, 2006).

Table 1 summarizes the main features of the selected corpora.

In our analysis of the corpus material, we have considered only finite clauses introduced by the three comparative subordinators.⁷ For *as if* and *as though*, we have included in the count all their occurrences in the seven corpora, both in their comparative use and in their complementizer function. For *like*, we have analyzed all the examples in the DCPSE in which *like* was tagged as a conjunction. By contrast, and for practical purposes, in the remaining corpora we have considered only those instances in which the subclause depends on one of the following predicates as trigger words: *appear*, *feel*, *look*, *seem*, and *sound*.⁸

Table 2. *As If* and *As Though* as Comparative Links and as Complementizers in the Corpora

	Comparative <i>as if</i>		Complementizer <i>as if</i>		Comparative <i>as though</i>		Complementizer <i>as though</i>	
LOB	104	104	42	42	51	51	22	22
FLOB	92	92	60	60	37	37	30	30
DCPSE-LLC	24	60	22	55	9	22.5	30	75
DCPSE-ICE-GB	20	50	39	97.5	7	17.5	18	45
Brown	101	101	39	39	38	38	27	27
Frown	110	110	44	44	33	33	20	20
TEA	21	11.7	23	12.8	6	3.3	4	2.2
Total n	472		269		181		151	

In each column, the first value is the raw figure; the second value is the normalized frequency per million words.

Due to the sampling method employed for the examples of *like*, the data for this connective are not included in Table 2, which shows the distribution of *as if* and *as though* in the corpora in their double function as adverbial subordinators and complementizers.

As the data in Table 2 show, both *as if* and *as though* are attested in all the corpora in both of their uses, though their frequency of occurrence in the Canadian English material is very low; notice in particular the almost negligible figures we have obtained for *as though* in this variety. This can be accounted for by the prevalence of the conjunction *like* in the Canadian data, which is shown below. Overall, in our material *as if* is more common than *as though* in both functions (except in the DCPSE-LLC where the complementizer *as though* is somewhat more common than the complementizer *as if*). The figures in Table 2 also indicate that instances where *as if* and *as though* introduce clauses that could be interpreted as complements rather than as adjuncts represent a secondary or subsidiary reading in the written corpora. It is worth noting, however, that in the British spoken material the proportions are clearly reversed, the complementizer function being found in the majority of cases.

Syntactic Patterns and Licensing Predicates

In what follows, the different syntactic functions in which clauses introduced by the comparative complementizers *as if*, *as though*, and *like* occur in the corpus material are discussed individually in order of decreasing frequency⁹. Due to the extraction method used for the *like* examples, the figures provided correspond only to *as if* and *as though*.

Subject Function

In our material, comparative complementizers most commonly occur in clauses realizing the function of the subject of the sentence,¹⁰ with a total of 271 examples. Within this function three patterns can be distinguished: (a) *(It) seems* + comparative complementizer + subject clause (147 exx.), (b) *It is* + comparative complementizer + subject clause (105 exx.), and (c) absent matrix (19 exx.).

The list of complement-taking predicates (CTPs) occurring in the pattern (*It*) *seems* + comparative complementizer + subject clause in the corpora with the complementizers *as if* and *as though* includes *appear* (1 ex.), *feel* (7 exx.; see OED s.v. *feel* v. III.16), *look* (68 exx.)/*not look* (5 exx.), *seem* (40 exx.)/*not seem* (1 ex.), and *sound* (25 exx.).¹¹ Illustrative examples of this pattern are given in (15) and (16).

(15) It looks as if the three of you will have a very cosy evening. (FLOB P29)

(16) It sounded as though she might ever again be alone with Mark. (LOB P06)

The complementizer *like* is also commonly attested in similar instances, as shown in (17).

(17) It seems like some people in Paris want to hear more from me than those fellers over at the conference house do. (Brown K27)

Particularly interesting in this pattern are instances with no anticipatory *it*, as in (18)–(20). Taking the three complementizers together, examples of this kind are recorded mostly, but not exclusively, in the spoken material: out of 41 examples of this type in the corpora (*as if* 6 exx., *as though* 2 exx., *like* 33 exx.), only 13 occur in the written sources. And it must be noted that these 13 examples from the Brown family of corpora are found without exception in fiction, mostly in fictional dialogues or monologues, as in example (20). The two predicates most commonly occurring in structures without *it* are *look* (19 exx.) and *sound* (16 exx.).

(18) Looks as if it might well have been doesn't it? (DCPSE: DI-B19)

(19) Sounds as though he must be. (DCPSE: DL-B18)

(20) "Seems like we're never going to see eye to eye, Lieutenant. Didn't they tell you what I wanted the p& a& system for?" (Brown L12)

The fact that in all such instances the verb is inflected for the present tense, and that the most common link is *like* (in 33 out of 41 exx.) could be taken as an indication that the combinations *looks like* and *sounds like* are close to fossilization, maybe on their way to becoming evidential markers of some kind, as happened with the construction *methinks* in Earlier English (López-Couso 1996a; Palander-Collin 1998; Wischer 2000). Evidence for this development is found in the occurrence of such combinations in parenthetical use, as in (21), from Mark Davies's Corpus of Contemporary American English (COCA).

(21) Going to be a big one, looks like. (COCA, 2009 Bk: Reliable Wife)

Quite frequently, subject clauses introduced by *as if* or *as though* depend on a matrix containing the verb *be* (89 exx.)/*not be* (16 exx.), rather than a verb of seeming. Examples (22) and (23) illustrate the pattern *It is* + comparative complementizer + clause. The "*it is as if*-construction," as it has been labeled, has been studied by Declerck (1992:222–223), who attributes to it a very specific discourse function, the expression of "what the speaker infers to be a possible interpretation of a given situation" (Declerck 1992:223).

(22) It was as if he'd bewitched them. (LOB K09)

(23) It was as though the biwa had been eaten up by the wind. (Brown P25)

Similar instances are also found with *like*, as in (24).

(24) And it was like you know she wasn't eighty-three years old. (DCPSE: DI-B74)

In addition to the two patterns discussed so far, the corpora yield examples in which the complement clause occurs on its own but can be understood as depending on an elided matrix of the kind *it is/seems/appears/looks*, etc. A total of 19 examples of this kind are attested in our material, as illustrated in (25) and (26).

(25) Everybody these days has to be something. Conservative, Socialist, Communist, as though you must belong to some party to have any opinion worth calling an opinion. (LOB N11)

(26) But almost as if she had some sort of message to give me or <,> (DCPSE: DI-B12)

In 15 of them, the clause has the illocutionary force of an exclamation, as in (27) and (28). These exclamatory clauses are discussed in Huddleston and Pullum (2002:1152) and also in Dancygier and Sweetser (2005:229), who refer to this structure as the “monoclausal use of *as if*,” where the clause typically expresses surprise, rejection, or regret.¹² A similar instance with *like* is (29), from Dancygier and Sweetser (2005:230 ex. 79).

(27) As if she would ever forget the importance of what they’d just promised! (Frown P11)

(28) As though that mattered now! (FLOB K25)

(29) Like I care!

Predicative Function

The second most frequent group of examples in the corpus (107 exx.) corresponds to a structure of the type *She seems as if/as though/like* + complement clause in what appears to be a case of raising out of a finite clause. In the literature this has been labeled “pseudo-raising” (Rooryck 2000:55-56) and “copy-raising” (Asudeh & Toivonen 2005, 2006). The range of CTPs found in this pattern is similar to that mentioned above in connection with subject clauses: *appear* (1 ex.), *be* (2 exx.), *look* (79 exx.)/*not look* (4 exx.), *seem* (7 exx.)/*not seem* (1 ex.), *sound* (11 exx.)/*not sound* (2 exx.). As shown in examples (30) and (31), the function of the clause is that of subjective predicative complement, and the subject of the matrix clause is a referential Noun Phrase, not the dummy subject *it*. Moreover, these Noun Phrase subjects are always definite and restricted to the second and third persons (Rooryck 2000:57). In most cases (93 exx. vs. 14 exx.) the subject of the matrix and that of the subclause are coreferential, as in (30), though this is not invariably so, as in example (31), where coreferentiality is established with a Noun Phrase other than the subject.¹³

(30) The landlord, a plump and harassed man named Barry, looked as if he had spent too much time enjoying his own product (FLOB A33)

(31) Plus flawless skin, smooth brow and cheeks, lips that looked as if you could get a shock from them. (Brown N17)

The complementizer *like* also occurs in this pattern (77 exx.), mostly with the predicates *look* (52 exx.) and *not look* (3 exx.), and most commonly in TEA (59 exx.). Illustrations are given in (32) and (33) below. Only five instances of *like* are found in the British English corpora: one in LOB (in fictional dialogues, Cat. N) and four in the spoken corpora. In the American English material, most *like* examples occur in imaginative prose (a few in press and belles lettres), which contrasts with occurrences of *as if* and *as though* in this pattern, which are recorded in all kinds of registers.

(32) He sounds like he's earned the right to play the blues. (Frown C04)

(33) He- he looks like he has the-whatever-we-call-it. (TEA nlui)

Object Function

A third possible function for *as if*, *as though*, and *like* complement clauses is that of object, as shown in (34). We have recorded 41 examples of this kind, mostly in the written material (30 exx.). The only CTPs occurring in these structures are *feel* (39 exx.; see OED s.v. *feel* v. II.6c., 9b, 9d, 15b), *find* (1 ex.; see OED s.v. *find* v. I.6.b), and *take* (1 ex.; see OED s.v. *take* v. VII.47.c).

(34) She felt as though her heart had been cut into pieces. (FLOB P 14)

Like also occurs very frequently in this pattern (155 exx.), predominantly in the spoken corpora, and mainly in the Canadian material (145 exx. in TEA + 2 exx. in DCPSE), as in (35) below. In the written corpora *like* in this pattern is mostly confined to the less formal imaginative prose.

(35) I told her that I'd had to take these tablets and that's why I felt like I wasn't thinking properly. (DCPSE: DI-A13)

Noun Complementation

The corpus also yields an example of nominal complementation, where the subclause introduced by *as though* complements the noun *look*. This is given as (36).

(36) But there was a look about her mouth as though she were tasting lemons. (Brown K 23)

Table 3 summarizes the information on syntactic functions and licensing predicates provided in the preceding paragraphs.

Semantic Predicates and Epistemicity

As the foregoing discussion shows, *as if*, *as though*, and *like* clauses in the most common functions in our material (i.e., subject and predicative complement) co-occur, without exception, with copular or linking verbs: either the copular verb *be* or verbs of seeming (including sensory verbs; see Quirk et al. 1985:1171-1174; Biber et al. 1999:436; Taylor & Pang 2008:131). Interestingly, the idea of equation characteristic of copular structures entails similarity, which could go a long way toward explaining why adverbial links of comparison fit well in complement structures of this kind.¹⁴

From a semantic point of view, all the predicates selecting *as if*, *as though*, and *like* complements in our data belong to the group of Propositional Attitude Predicates (PAPs) in Noonan's (1985) taxonomy of CTPs. As such, they convey "an attitude regarding the truth of the proposition expressed as their complement" (Noonan 1985:113). More specifically, the predicates we have identified in the corpora could be characterized as expressing medium modality on a scale of strength of speaker commitment (Huddleston & Pullum 2002:175-177). Obviously, the copula *be* in examples (22)–(24) above cannot be ascribed to any of Noonan's semantic classes. It should be noted, however, that in such cases it is the *it is as if* construction as a whole that conveys the speaker's inferences (Declerck 1992:223). In other words, such cases involve epistemic modality, which by definition "qualifies the speaker's commitment to the truth of the modalised proposition" (Huddleston & Pullum 2002:52). It seems therefore that the use of the comparative complementizers in the structures at issue harmonizes either with the epistemic nature of the CTP in the matrix (Huddleston &

Pullum 2002:1152) or with the epistemic function of the whole construction. Put differently, comparative complementizers can be said to lessen the speaker's endorsement of the embedded proposition, and complement clauses introduced by them are seen as inferences gained from evidence.

Table 3. Syntactic Patterns and Licensing Predicates

Function	Predicates	Total
Subject		271
(a) <i>(it) seems</i> + clause	<i>appear</i> (1)	(147)
	<i>feel</i> (7)	
	<i>look</i> (68) / <i>not look</i> (5)	
	<i>seem</i> (40) / <i>not seem</i> (1)	
	<i>sound</i> (25)	
(b) <i>it is</i> + clause	<i>be</i> (89) / <i>not be</i> (16)	(105)
(c) absent matrix		(19)
Predicative complement	<i>appear</i> (1)	107
	<i>be</i> (2)	
	<i>look</i> (79) / <i>not look</i> (4)	
	<i>seem</i> (7) / <i>not seem</i> (1)	
	<i>sound</i> (11) / <i>not sound</i> (2)	
Object	<i>feel</i> (39)	41
	<i>find</i> (1)	
	<i>take</i> (1)	
Noun complementation	<i>look</i> (1)	1

The close association of *as if/as though/like* complements with a particular type of CTP is in line with the constraints we have also observed in our work on other minor complementizers at different stages in the history of English. For example, the complementizer *but* normally occurs with predicates of negative import, especially those denoting doubt (López-Couso & Méndez-Naya 1998); the complementizer *lest* is confined to clauses dependent on predicates of fearing (López-Couso 2007); and the finite declarative complementizers *if* and *though* typically occur with commentative predicates (Noonan 1985:117), that is, those denoting an emotion or an evaluation on the part of the speaker (López-Couso & Méndez-Naya 2001).

Complementizer Variation

Variation between Comparative Complementizers

We now move on to the analysis of the variation between the three comparative complementizers, paying attention to the textual and dialectal factors that may determine their choice. Table 4 gives the figures for the three links in the British, American, and Canadian English corpora, with the predicates *appear*, *feel*, *look*, *seem*, and *sound* as trigger words.

Table 4. Distribution of *As If*, *As Though*, and *Like* with the Predicates *Appear*, *Feel*, *Look*, *Seem*, and *Sound* in the Corpora

	<i>As If</i>		<i>As Though</i>		<i>Like</i>	
LOB	33	33	16	16	3	3
FLOB	35	35	23	23	3	3
DCPSE-LLC	17	42.5	24	60	–	
DCPSE-ICE-GB	30	75	18	45	14	35
Brown	28	28	17	17	11	11
Frown	27	27	14	14	41	41
TEA	9	5	–		359	199.4

In each column, the first value is the raw figure; the second value is the normalized frequency per million words.

Table 4 provides a number of interesting insights into the variation of the three comparative complementizers. As already suggested by the data in Table 2, the figures in Table 4 further support the idea that the minor declarative complementizers *as if*, *as though*, and *like* are more closely associated with the spoken language than with the written medium. The normalized frequencies for the three links in the spoken British material (DCPSE) are much higher than those in the contemporary written corpora LOB and FLOB. Of the three complementizers, *as if* is the preferred choice in most of the corpora we have analyzed. The only exceptions correspond to spoken British English from the 1960s (DCPSE-LLC), where *as though* is the most common link, and to written American English from the 1990s (Frown) and Canadian English, which both show a clear predominance of the complementizer *like*. Notice that, in the latter variety, the complementizer *as though* is not recorded in our data and that the proportion of *as if* is negligible. In turn, in the British English written corpora the complementizer *like* is almost nonexistent. Moreover, it is not recorded in the spoken material from the 1960s, although it becomes quite popular in speech in the 1990s.

A look at the distribution of the three complementizers in the different text types of the British and American written corpora reveals a clear preference of these links to occur in imaginative prose (67.1 percent), particularly in fictional dialogue, rather than in informative prose (32.9 percent). This corroborates the close association of these minor complementizers with the spoken language mentioned earlier. Nevertheless, the data from the Brown family of corpora suggest the existence of a cline of formality for the three comparative complementizers in written Present-Day British and American English, with *as if* at the most formal end and *like* at the informal end of the continuum (see Figure 1). For example, in the LOB corpus instances of *like* are restricted to fictional dialogue (three examples in Cat. N, Adventure and Western Fiction), *as though* occurs predominantly in imaginative prose (13 examples as opposed to three instances in informative prose), and the examples of *as if* are evenly distributed between informative and imaginative prose (17 examples in each group).

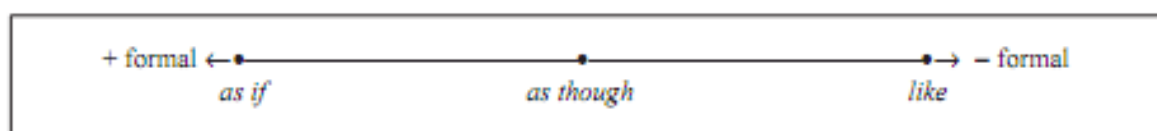


Figure 1. Cline of formality of comparative complementizers in written British and American English

It must also be noted that the already mentioned increase of *like* in American written English from the 1990s as represented in Frown is attested not only in imaginative prose but also in informative texts. This finding suggests that, in Present-Day American English, the complementizer *like* has expanded beyond the domain of informality and has lost its original stigmatized character, as noted by Huddleston and Pullum (2002:1158).

Comparative Complementizers versus That

In addition to the competition among *as if*, *as though*, and *like* discussed in the previous section, the variation between the comparative complementizers and the major complementizers *that* and zero is also worth investigating. For our present purposes, only *that* has been considered, due to the impossibility of automatic retrieval of examples with the zero complementizer. Table 5 gives the figures for the variation between *that* and the comparative complementizers with the predicates *appear*, *feel*, *look*, *seem*, and *sound* as trigger words in the British and American English corpora.

The most immediate insight to be gained from the data in Table 5 is the clear predominance of the default complementizer *that* in all corpora. A closer look at the data indicates that the variation of *as if*, *as though*, and *like* with the major complementizer *that* seems to be structurally restricted, since it is available only for those patterns in which the clause functions as subject or object. For the predicative function, by contrast, the variation is established with infinitival clauses instead.

Most significantly, besides being structurally restricted, the variation between the comparative complementizers and *that* also turns out to be lexically constrained. Table 6 gives the breakdown of the data in Table 5 according to individual predicates.

The data in Table 6 demonstrate that the selection of either the comparative complementizers under analysis or the major complementizer *that* is clearly lexically determined. The predicates *look* and *sound* categorically select the minor links *as if*, *as though*, and *like*. The only example of the complementizer *that* with one of these predicates in the corpora is (37). Example (9), repeated here as (38), also shows *that*, but it involves a reformulation. Here *that* resumes the link *as though* after the insertion of intervening material.

(37) It sounds that you're wanting to take care of yourself physically as well (DCPSE: DI-A 11)

Table 5. Variation between the Comparative Complementizers and *That* with the Predicates *Appear*, *Feel*, *Look*, *Seem*, and *Sound* as Trigger Words in the British and American English Corpora

	Comparative complementizers		Complementizer <i>that</i>	
LOB	52	52	196	196
FLOB	61	61	123	123
DCPSE-LLC	41	102.5	109	272.5
DCPSE-ICE-GB	62	155	71	177.5
Brown	56	56	153	153
Frown	82	82	101	101

In each column, the first value is the raw figure; the second value is the normalized frequency per million words.

Table 6. Comparative Complementizers vs. Complementizer *That* with the Predicates *Appear*, *Feel*, *Look*, *Seem*, and *Sound* as Trigger Words in the British and American English Corpora

	<i>Appear</i>		<i>Feel</i>		<i>Look</i>		<i>Seem</i>		<i>Sound</i>	
LOB	–	32	10	112	32	–	8	52	3	–
FLOB	–	20	13	63	38	–	7	40	3	–
DCPSE-LLC	–	–	4	78	24	–	4	31	9	–
DCPSE-ICE-GB	–	1	7	47	33	–	4	22	18	1
Brown	1	18	5	85	27	–	15	50	8	–
Frown	1	13	20	54	40	–	11	34	5	–

In each column, the first value is the figure for comparative complementizers; the second value is the figure for the complementizer *that*.

(38) = (9) “I tell you I can’t believe it. It’s—it’s not right. It looks as though you’ve, well, that you’ve forgotten Dad.” (FLOB N25)

Our data for *look* and *sound* are therefore in line with the information provided by Huddleston and Pullum (2002:962n8), who report that *that* clauses are only “very occasionally found” with these two predicates¹⁵. The existence of predicates that exclude *that* and (virtually) obligatorily select comparative complementizers would indicate that *as if*, *as though*, and *like* can be considered complementizers in their own right (Rooryck 2000:56).

The opposite tendency is witnessed for the predicate *appear*, which almost categorically selects the complementizer *that*. The only two corpus instances with a comparative link are given as (39) and (40).

(39) You had to have convictions to lie down in the road in all those clothes and appear as though you might wish to turn yourself out of your own home. (Brown P08)

(40) When he noticed that he was being watched, Milt Saunders sank his head between his shoulders so that it appeared momentarily as if he had no neck. (Frown P26)

By contrast, the predicate *seem* shows true variation: though the major complementizer *that* clearly prevails in all corpora (229 exx.; 82.4 percent), *as if*, *as though*, and *like* complement clauses also occur (49 exx.; 17.6 percent). In our opinion, complementizer selection with *seem* may reflect the degree of the speaker's endorsement of the embedded proposition, which is higher in the case of *that*. This is suggested by the existence of an interesting difference between the two types of complementizers as regards the expression of an experiencer Noun Phrase in the sentence. In the case of *seem* + *that*, 36.7 percent of examples show an overt experiencer, mostly a first person one (70.5 percent of the cases where the experiencer is expressed). An illustration is given in (41), where *it seems to me that* indicates the speaker's belief and his or her commitment to the truth of the proposition in the subclause, and could thus be considered a (less face-threatening) alternative to *I think* or *I believe*. In the case of *seem* + comparative complementizers the proportion of examples with an overt experiencer with *seem* drops to just 13.1 percent, eight examples in all, only three of which feature a first person experiencer. Example (42) illustrates *seem as though* with a third person experiencer.

(41) In Rowe's opinion this response is a failure, but it seems to me that he has overlooked some considerations which show his assessment to be unwarrantedly pessimistic. (Frown D11)

(42) It seemed to the frightened judge as though his son would actually shoot the craft in under the outer end of the wharf. (LOB N03)

Although the low number of examples does not warrant definite conclusions, this finding seems to point to a crucial difference between *that* and comparative complementizers both in terms of the evidential types in which they occur (belief vs. inference) and as regards the degree of speaker commitment (higher vs. lower) that they convey (see Cornillie 2007:36, 41 for parallel Spanish examples).

The last predicate whose behavior we have analyzed is *feel*. Here the situation is somewhat more complex than with the other CTPs, since a distinction needs to be made between the two syntactic patterns available with this predicate. In the structure *it feels* + subject clause (nine examples, as in (43) below) only comparative complementizers are available. By contrast, in clauses in object function, as in (44), *that* clearly predominates in all corpora (89.9 percent).

(43) When they sat down, it felt as if they were on display, which Robin didn't seem to mind. (Frown K13)

(44) So I felt that these voices were sort of growing in my imagination (DCPSE: DI-E04)

Concluding Remarks

In this article we have shown that, in addition to their primary use as adverbial subordinators of Comparison and Similarity, *as if*, *as though*, and *like* also serve as complementizers in PDE, as counterparts of the major links *that* and zero. In their complementizer function, these minor links are particularly common in copular structures. Notice that the idea of equation entails similarity, so that original adverbial links of Comparison and Similarity, such as *as if*, *as though*, and *like*, fit the bill.

The variation between the comparative complementizers and the major link *that* is both structurally restricted (it is available only when the clause realizes the subject or the object function) and lexically determined. As is the case with other minor complementizers, *as if*, *as though*, and *like* are constrained to occur with a specific type of CTP. In our data *as if*, *as though*, and *like* complements prototypically depend on PAPs encoding a medium degree of commitment toward the truth of the embedded proposition (*appear*, *look*, *seem*, etc.). The selection of comparative complementizers is compatible with the idea of a hypothesis evoked by the matrix predicate; in other words, it harmonizes with the nature of the CTP in the matrix. However, the fact that some of our predicates favor *that* (e.g., *appear*), while others categorically select comparative links (e.g., *feel* with subject clauses or *look*), may indicate the existence of differences between the predicates at issue regarding the strength of the modality they convey.

The analysis of the corpus material here indicates that the minor declarative complementizers *as if*, *as though*, and *like* are more closely associated with the spoken language than with the written medium, where they are typically found in informal text types, particularly in fictional dialogue. Of the three comparative links, *as if* is the preferred choice in four of the corpora analyzed (LOB, FLOB, Brown, DCPSE-ICE-GB). The DCPSE-LLC material shows a predominance of *as though*, while in written American English from the 1990s (Brown) and, especially, spoken Canadian English (TEA) *like* is far more common. *Like* also shows a marked increase in spoken British English from the 1990s (DCPSE-ICE-GB). Moreover, the distribution of the three links across text types suggests the existence of a cline of formality, with the complementizer *as if* at the most formal end of the continuum and *like* at the informal end. However, evidence from Frown indicates that in Present-Day American English the complementizer *like* is starting to expand beyond the domain of informality.

Further corpus research is certainly needed on topics such as the Verb Phrase in the subclause (e.g., the occurrence of modally marked forms and of the interpretive progressive) and the presence of other epistemic markers (such as modal adverbs) in the construction. This may help us to discover whether the choice of different comparative links correlates with varying degrees of the speaker's commitment toward the truth of the embedded proposition [].

Appendix C. 5

Generation

Philip C. Meyers

Generative Learning theory draws upon aspects of cognitive psychology to explore the processes involved in human learning and examines how an understanding of those processes should inform pedagogy. Originating within the discipline of educational psychology, the theory was initially developed in the context of L1 reading (Wittrock 1974) and is supported by an extensive body of research in subjects as diverse as mathematics, science, auto-mechanics, and L2 vocabulary learning (Grabowski 2004; Meyers 2010).

According to Generative Learning theory, rather than being passive recipients of information, learners are active participants in the learning process. Thus, the theory proposes that learners generate ‘semantic and distinctive idiosyncratic associations between stimuli and stored information’ (Wittrock *ibid.*: 89) as they construct (i.e. generate) meaningful understandings of new information. Two kinds of associations are said to lead to learning: those generated between new information and pre-existing knowledge and experience (i.e. learners understand the new information in terms of what they already know) and those generated between individual new items of information (i.e. learners understand how the new items of information relate to one another).

Generative Learning theory therefore provides a framework for teaching that invites classroom practitioners and materials developers to consider how individual learners use their knowledge and experience when they engage with learning tasks. It consequently challenges one-size-fits-all or correct/incorrect answer approaches to teaching and learning. Generative Learning theory deals with the practical implications of learners’ construction of meanings and the consequences this has for pedagogy (i.e. what teachers can do to facilitate these generative processes), and as a result, it has been referred to as the ‘practical cousin of constructivism’ (Bonn and Grabowski 2001: 2), constructivism being the approach(es) that place personal meanings at the centre of the learning process (as exemplified by the work of Piaget 1953, Kelly 1955, and Bruner 1960).

Within L2 research, Generation has been identified as one of the deepest levels of processing (Stahl and Fairbanks 1986). Generation is often discussed in the context of vocabulary learning, for example Nation (2001) suggests that Generation is one of the most important processes involved in learning a word (see also Joe 1998). However, it is, in fact, independent of the subject matter and extends beyond vocabulary development to the learning of all aspects of a language. Furthermore, despite a tendency among language specialists to associate Generation with productive language use, it should be noted that Wittrock’s initial research (1974) was conducted with remedial L1 reading (a receptive activity).

Generative teaching

Wittrock (1991) argued that if learning is a function of associations generated between known information and to-be-learned information, pedagogy and learning tasks should be designed to facilitate the creation of those associations.

Thus, a relatively straightforward approach to developing generative learning in the classroom is to evaluate the ‘generativeness’ of existing teaching methods and learning activities, considering how they can be made more generative. For example, a common vocabulary activity is one in which learners create context sentences for target vocabulary items (for example Hulstijn and Laufer 2001). Such an activity can be made more generative if learners are instructed to write about a personal experience or relate the sentence to themselves. According to Generative Learning theory, this generates a link between students’ knowledge and experience and the target words they are trying to acquire. Additionally, associations between new vocabulary items can be strengthened by requiring students to use two or three of the target words in a single sentence.

Of course, generative teaching methods are not limited to vocabulary learning. They can be used within areas such as grammar teaching (for example write ten sentences about yourself using the past perfect form). Reading material might take the form of a personality test or a ‘your ideal career (or partner)’ questionnaire, activities that encourage students to engage more deeply with the reading material because the generative twist means that texts are no longer simply about imaginary or historical characters, but now, in a sense, are about them. Thus, a potential benefit of generative tasks is that they encourage students to become more personally involved with their work, while a practical change for teachers is that, in many generative activities, answers are no longer ‘right or wrong’ and assignments might be graded more holistically.

In conclusion, although Generative Learning theory was introduced to ELT in the context of vocabulary research, its importance extends far beyond vocabulary learning into all areas of the ELT curriculum. Thus, by reviewing and modifying existing activities and tasks, while devising further generative classroom practices, teachers can facilitate this fundamental learning process amongst students [].

Appendix C. 6

Where do Phonemes Come from? A View from the Bottom

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ABSTRACT

Infants have a remarkable ability to perceive all manner of phonetic contrasts. The phonological categories of a language, however, have to be learned from experience. Two learning paradigms are contrasted – supervised learning (where learners receive feedback on their categorization attempts) and unsupervised learning (where learners rely only on properties of the input). It is argued that unsupervised learning may be the appropriate paradigm, at least for the initial stages of acquisition. Thereafter, the emergence of phoneme categories draws on various kinds of knowledge available to the learner, including knowledge of articulation, and of literacy conventions. A concluding section emphasizes the taxonomic nature of the phoneme, and suggests that the special salience of a phonemic representation reflects the status of the phoneme as a basic level category.

KEYWORDS: phoneme; perception; structuralism; categorization; unsupervised learning; basic level

I. INTRODUCTION

In a well-known passage, Saussure commented on what our mental experience would be like if we did not possess language:

Psychologiquement, abstraction faite de son expression par les mots, notre pensée n'est qu'une masse amorphe et indistincte. ... [S]ans le secours des signes, nous serions incapables de distinguer deux idées d'une façon claire et constante. Prise en elle-même, la pensée est comme une nébuleuse où rien n'est nécessairement délimité. Il n'y a pas d'idées préétablies, et rien n'est distinct avant l'apparition de la langue (Saussure, 1915: 155).¹

Without language, Saussure claimed, thought would be inherently featureless and unstructured. For Saussure, it was language – more specifically, the conceptual categories symbolized by language – that gave structure to the amorphous substance that is prelinguistic thought. Saussure made an analogous claim about the sound substance of language. Without the mediation of a language and its phonological system, the speech signal would be equally indistinct and formless:

La substance phonique n'est pas plus fixe ni plus rigide; ce n'est pas un moule dont la pensée doit nécessairement épouser les formes, mais une matière plastique qui se divise à son tour en parties distinctes pour fournir des signifiants dont la pensée a besoin (Saussure, 1915: 155).²

We can, of course, only speculate about the mental life of a person without language – a new born infant, for example, or a wild child. We are on firmer ground when it comes to our perception of the speech signal in ignorance of the linguistic categories which it encodes. When we are listening to a language which is totally unknown to us, Saussure's metaphor of the 'nébuleuse', where nothing seems clearly

delineated, seems particularly apt. Learning the language consists inter alia of learning to ‘make sense’ of the acoustic signal, segmenting it into distinct units, classifying the units and their combinations, and, ultimately, recognizing in the signal the expression of meaningful words and phrases. This is a process which each child (with the exception, of course, of the profoundly deaf) must go through. In this paper, I comment on some aspects of this remarkable achievement, with special focus on the emergence of segmental categories.

II. PHONOLOGICAL UNITS

One might suppose that mastering the sound system of a language would consist in learning to make progressively finer perceptual distinctions amongst the sounds that one encounters in the acoustic signal. Much ingenious experimentation, however, has demonstrated that this is not how first language acquisition proceeds. It is now well established that newborn infants are exquisitely sensitive to speech sounds, being able to discriminate all manner of contrasts which are utilized in the various languages of the world (Aslin *et al.*, 1998; Aslin *et al.*, 1981; Eimas *et al.*, 1971; Jusczyk, 1997; Kuhl, 1987; Werker & Tees, 1984). While this remarkable ability surely facilitates entry into the sound system of whatever language a child is going to learn, the ability to discriminate sounds is not sufficient for phonological acquisition to take place. A person able to perceive all manner of acoustic-phonetic differences would be rather like Luria’s (1968) mnemonist, or the fictitious Funes of Borges’s (1964) story – individuals with a phenomenal ability to notice and remember every detail of their experiences but who, as a consequence, are unable to generalize and form abstractions. For speech perception to get under way, it is necessary for *categories of acoustic events* to be recognized in the kaleidoscope of auditory impressions.³ Some chunks of the acoustic signal need to be regarded, in the phonological system that is being acquired, as being ‘the same’ as other chunks. The first question we need to ask, therefore, concerns the nature of these chunks that the learner needs to identify. There are at least three plausible candidates with regard to the linear segmentation of the speech signal (the list is not exhaustive, and the kinds are not mutually exclusive): Words, syllables, and parts of syllables.

That competent hearers of a language perceive words in the stream of speech is self-evident. Listening to speech is essentially a matter of listening for words, and word-like units, and learning a language involves, amongst other things, learning the sound shapes of words.⁴

Indeed, Jusczyk (1997: 108) suggests that the identification of words in the stream of speech is what “speech perception capacities are ultimately intended for”, while others have proposed that the learner’s identification of word-sized units may well bootstrap the whole language acquisition process (Beckman & Edwards, 2000; Beckman & Pierrehumbert, 2000).

During the earliest stages of language acquisition, it may well be the case that words are learned, stored, and retrieved as phonological wholes, without internal analysis (Jusczyk, 1997; Vihman, 1996). While a reliance on gestalt storage might be viable at a time when the child’s linguistic repertoire consists of at most a couple of dozen items, the increasing size of the child’s lexicon necessitates other, or additional

storage modalities. This is because the number of holistic sound shapes that a person could reliably differentiate and commit to memory is severely limited. As the size of the lexicon increases, some kind of internal analysis of the word-sized units becomes necessary. Thus, pieces of one word might be identified with pieces of other words, the pieces themselves might in turn be broken down into even smaller units. In this way, a relatively small inventory of phonological units, and patterns for their combination, will be able to support the learning of a large and ever expanding lexicon.⁵

Candidates for the internal analysis of words are syllables, parts of syllables (such as onsets and rhymes), and, ultimately, consonant and vowel segments. Syllables, as units of analysis, would seem to be especially appropriate for languages such as Japanese and Māori, where the number of possible syllables in the language is quite limited. This is reflected in the katakana and hiragana writings systems of Japanese, in which each syllable is represented by a distinct symbol (exactly 46 are needed.). When the number of different syllables in a language increases, internal analysis once again becomes necessary. Thus, traditional accounts of Mandarin phonology analyze the 400 or so occurring syllables (this number disregards tonal differentiation) in terms of the combination of initials and finals, i.e. onsets and rhymes. For English, and other languages with complex syllable structures, in which the number of different syllables runs into the thousands, further analysis is necessary, namely into the individual phonemes (or, perhaps better, the positional allophones) which make up the syllables.

Words, syllables, and phonemes/allophones, as units of perception and representation, all raise the same problem, namely, that of acoustic variability. A word, syllable, or phoneme can be pronounced in a virtually unlimited number of ways according to the linguistic context of the unit (its immediate phonetic environment, its place within an intonation contour, the overall rate of speech, etc.) as well as speaker-dependent properties (dialect, gender, age, speaker-specific properties of the vocal tract, and even such factors as the state of the speaker's dentures).

Bloomfield (1933) had supposed that various manifestations of a phoneme would share some common acoustic features. The invention of spectrographic analysis in the 1940's, however, and early attempts to synthesize speech by concatenating invariant segments, brought home to phoneticians in a particularly dramatic way the lack of acoustic invariance associated with the units that we hear in the speech signal (Potter et al., 1947). Liberman and his colleagues (Liberman et al., 1967; Liberman & Mattingly, 1985) developed their 'motor theory' of speech perception largely in response to this state of affairs. Specifically, they sought to locate invariance, not in the signal itself, but rather in the motor commands which gave rise to the acoustic signal. Later versions of the theory located invariance, not in the motor commands themselves, but in a speaker's "intended phonetic gestures" (Liberman & Mattingly, 1985: 2), thereby pushing the invariants into a domain which in principle is out of reach of empirical observation.

The invariance problem is a familiar one to categorization researchers. In fact, the (largely unsuccessful) search for acoustic constants in the speech signal following the invention of spectrographic analysis is merely a variation on the theme of the non-viability of 'classical' categories in general. Classical categories, it will be recalled, are defined in terms of a set of necessary and sufficient features. Especially from the

1970's onwards, it became apparent that most categories that people operate with – for example, the categories that are conventionally named by the lexemes of their language – are not in fact susceptible to classical definitions; moreover, the features which supposedly define the categories are subject to the very same problem (Taylor, 2003b, to appear). In light of these findings, various alternative models of categorization were developed. These included prototype models (in which categories are centred around 'good examples'), probabilistic models (in which categories are defined in terms of weighted probabilities of features), and exemplar models (where categories are constituted in terms of the similarity of already encountered instances). In view of this extensive research (reviewed in Murphy, 2002; see also Mompeán, 2002: Ch. 1) it should come as no surprise that phonemes, syllables, and words should also resist definition in terms of sets of invariant acoustic features.

III. SUPERVISED OR UNSUPERVISED LEARNING?

The 'discovery' of the phoneme has been described as "one of the most magnificent achievements of linguistic science" (Krámský, 1974: 7). The hyperbole of this statement conceals the fact that the phoneme concept is by no means a modern invention. It is the basis of all alphabetic writing systems (though, to be sure, few writing systems are consistently phonemic), and even speakers of unwritten languages are reported to have intuitive access to the phonemic structure of words.⁶ Symptomatic of the popular acceptance of the notion is the fact that most monolingual and bilingual dictionaries nowadays give word pronunciations in some form of phonemic transcription. Yet, like many of the most basic concepts of linguistics – such as 'word', for example – a concise definition remains elusive, and indeed the phoneme concept has been, and remains, the subject of intense and ongoing theoretical controversies. Later in the paper I will touch on generative phonologists' rejection of the need for a distinct phonemic level of representation. In the meantime, I focus on some of the controversies which engaged the linguistic community in pre-generative days. Indeed, a glance at the journals of the time – as well as at the contents page of Joos's (1957) influential *Readings in linguistics* – gives the impression that the history of North American linguistics during the mid decades of the last century was in large part a confrontation with the problematics of the phoneme concept.

A major issue in pre-generative times concerned the criteria by which the phonemes of a language are to be established. One of the orthodoxies of the time was the prohibition on the 'mixing of levels' (Bloch, 1948; Hockett, 1942). The idea was that the investigation of a language should proceed in a strictly 'bottom-up' fashion. The investigating linguist first made detailed phonetic transcriptions of a corpus of native speaker utterances. Observation of the distribution of phonetic segments ('phones') would then permit the allocation of these segments to a fixed set of phonemes, accompanied by statements for the possible realizations of each phoneme in various contexts. Importantly, phonemic analysis was to be conducted without any reference to 'higher' levels, such as the words and morphemes of the language, nor, of course, to their meanings.⁷ Subsequently, linguistic analysis would proceed to the identification of allomorphs and their allocation to morphemes (again, without reference to their meaning), followed by the identification of word classes, syntactic patterns, and so on (Harris, 1951).

These discussions (for a review, see Heitner, 2005) may strike the modern reader as very arcane. Pike (1947), for one, ventured to state that no field linguist would ever proceed in the way demanded by the orthodoxy of the time, by ignoring meaning and strictly excluding any ‘top-down’ analysis. Nevertheless, I would suggest that the issues that were discussed in the 1940’s and 1950’s do relate to a matter which is very much of modern concern. Updating the discussions of more than half a century ago into more modern terminology – and fudging the distinction between the linguist’s analytic procedures and the processes of language learning by children (and by machines)⁸ – the question would be whether phoneme categories can emerge in unsupervised as opposed to supervised learning conditions. In supervised learning, the learner (whether human or machine) is presented with a set of stimuli which are labeled as members or non-members of the target category or categories (the labeling may take the form of feedback on the correctness or otherwise of the learner’s attempts at categorization). Subsequently, the learner may be tested on new stimuli, which are presented without labeling or feedback, with the aim of determining how well the categories have been learned, and how ‘ambiguous’, or otherwise problematic stimuli will be handled. In unsupervised learning, on the other hand, the learner is simply presented with a set of stimuli and is required to group them into categories. The stimuli are not labeled, no feedback is provided, nor is the learner given any hints as to how many or what kinds of categories are to be formed.

It will be apparent that a strict application of the dogma of the separation of levels is in essence a prescription for unsupervised learning. Indeed, linguists of the time were much concerned with developing a set of ‘discovery procedures’ – that is, a set of algorithms – which would correctly, and ‘automatically’, identify the phonemes of a language, given only a narrow phonetic transcription. The phonemic analysis would ‘emerge’ from the phonetic properties of a corpus, without the analyst needing to be aware that two phonetically similar stretches were merely variant pronunciations of the same word (i.e., that the pronunciations were in free variation), or whether they in fact constituted pronunciations of different words (i.e., constituted minimal pairs). If access to this latter kind of information were to be available, we would be in the domain of supervised learning...

The matter becomes more complicated still when we bear in mind that word learning is not only a question of learning semantic categories, the word forms themselves have to be learned. The learner, namely, has to realize that the multifarious ways in which dog can be pronounced all count as pronunciations of ‘the same word’. The learner could, in principle, explore the hypothesis that variations in the duration of the vowel, or whether the final consonant is released or not, might correlate with meaning differences, e.g. big dogs vs. small dogs, brown dogs vs. spotted dogs, well-behaved dogs vs. yapping dogs. Children, presumably, do not systematically explore these possible correlations between form and meaning, any more than the field linguist would test each of the myriad hypothetical senses of *gavagai*, in Quine’s (1960) well-known example.⁹ As Bloomfield stated, the learner would need to be apprised of the fact that the various pronunciations are, indeed, ‘the same in form’, as well as being ‘the same in meaning’.

There are, to be sure, certain circumstances in which a learner might be explicitly alerted to the fact that different pronunciations count as ‘the same’, while other pronunciations are ‘not the same’, as, for example, when second language learners are being trained on the discrimination of minimal pairs (*ship* vs. *sheep*, and the like). The extent of this practice with children acquiring their native language is probably quite limited, and is likely to be restricted, in any case, to older children perceived to be suffering from delayed development. (We should bear in mind, also, that languages are acquired in all manner of socio-cultural settings. Whether or not children are coached in matters of pronunciation, they all – barring pathological cases – end up with adult mastery of the ambient language.) One possibility might be that learners themselves ‘discover’ the existence of minimal pairs, by noting, for example, that the pronunciations of *coat* refer to one kind of entity, while the pronunciations of *goat* refer to a quite different kind of entity. The need to make the conceptual distinction would therefore trigger awareness of the corresponding phonological categories. Some researchers have indeed suggested some such mechanism of phoneme acquisition (Werker & Tees, 1984).¹⁰

There are, however, a number of theoretical and empirical problems associated with the view that phoneme categories emerge on the back of minimal pairs. In the first place, while the existence of minimal pairs might be diagnostic of phoneme categories, it must fail as a definition of the phoneme. In English, there are scarcely any minimal pairs contrasting [ʃ], and [ʒ], or [θ] and [ð], yet we would still want to regard these sounds as belonging to different phonemes of English.¹¹ Moreover, the existence of minimal pairs will be largely a matter of the size of a person’s lexicon. For young children, with very small vocabularies, minimal pairs, for any pair of candidate sounds, are vanishingly rare. Caselli et al. (1995) list the first 50 words produced and understood by both English-speaking and Italian children. The English lists contain no minimal pairs, while the Italian lists contain only *nonna* ‘granny’ and *nanna* ‘sleep’. Even more telling is the fact that by the age of 1, children are already well on their way to perceiving the ambient language ‘phonemically’ (Jusczyk, 1997), that is, they are categorizing the ambient speech sounds in line with the phonological structure of the language they are to acquire. At this stage, children have scarcely learned any words of their language at all, so cannot be relying on lexical contrasts. Once again, we are forced to the conclusion that the supervised learning paradigm – where learners have the task of categorizing labeled stimuli – simply fails to apply.

The role of supervised learning (or, rather, its absence) turns up in connection with yet another issue in language acquisition research, namely, the problem of negative evidence (Bowerman, 1988; Pinker, 1984). In supervised category learning, learners receive feedback on whether their classification of a stimulus is correct or not. Yet when it comes to the learning of the syntactic structures of their language, children are rarely given information on which of their utterances are grammatically ill-formed. Caretakers may comment on the factual correctness of a child’s utterance, or on its stylistic or pragmatic appropriateness, but rarely, or not systematically, on its grammatical properties. A question that has much concerned researchers in language acquisition, therefore, is how a child comes to ‘unlearn’ the generalizations which give rise to utterances such as *They didn’t wented*, or *He said me no*. It clearly will not do

to say that the learner comes to regard these expressions as ungrammatical because they are never encountered in the input. Many things that speakers say are unique creations, never before encountered, but are not, for that reason, to be rejected as ungrammatical. One factor that seems to be involved is the child's working assumption that languages avoid synonymy (Clark, 1987). The learner comes to regard her own utterances as ill-formed to the extent that they are pre-empted by alternative wordings encountered in the input (Tomasello, 2003). Whatever the plausibility of this account, it is clear that learners must work out the properties of syntactic constructions largely on the basis of the input, its properties, and their analysis of it, not from explicit instruction or feedback on grammaticality.

The above considerations all point in the same direction, namely, that the supervised learning paradigm may not be applicable to first-language acquisition. Words do not come tagged with their semantic and phonological categories, nor is information provided on which utterances count as 'the same' in form and in meaning. I will not, in the following, pursue the question of the learning of semantic categories. With respect to phonological categories, however, there are grounds for taking seriously the reality of unsupervised learning, exactly as the structuralist insistence on the separation of levels entailed.

IV. UNSUPERVISED LEARNING OF PHONOLOGICAL CATEGORIES

Categorization has been a major research topic in cognitive psychology; for a review of the by now voluminous literature, see Murphy (2002). Surveying this literature, one is struck by the fact that the vast bulk of the research has been in the supervised learning tradition, employing procedures that in the psychological literature are commonly referred to as 'category formation' experiments. The term may actually be something of a misnomer, since the categories in question have already been formed, namely, by the experimenter; the subject's task would therefore be more accurately described as one of problem solving rather than category formation (Fodor 1980). The subject, that is, has to work out the criteria by which certain stimuli have been put into a certain category, whereas other stimuli have not. Much of this research has been conducted on the example of visually presented stimuli; in comparison, the categorization of (non-linguistic) auditory stimuli has been neglected (but see Lotto, 2002). There is, however, a modest tradition of concept formation experiments conducted on the example of phonological categories (Jaeger, 1980, 1986; Jaeger & Ohala, 1984; Mompeán, 2002; Weitzman, 1992).

As mentioned, surprisingly little research has been conducted by cognitive psychologists on unsupervised learning, or 'category construction', as Murphy (2002: 126) calls it, in contradistinction to 'category formation'. The little research that Murphy reports suggests that the categories that subjects spontaneously construct in such experiments are quite different from the categories that they normally operate with. There is a tendency, namely, for subjects to seize on a single dimension of the stimuli, such as their size, or colour, and to group them accordingly (Murphy, 2002: 128). The complex, multi-dimensional, and probabilistic categories enshrined in the lexicons of human languages rarely emerge.

Further perspectives on supervised and unsupervised learning are provided by the computational modelling of learning, especially in artificial neural networks (McLeod et al., 1998). (It is, in fact, from the computational literature that I have taken the terms ‘supervised’ and ‘unsupervised’). Consider a typical connectionist set-up. An array of input nodes is linked, possibly via one or more sets of hidden nodes, with an output array. Initially, the nodes are connected by randomly assigned connection weights. An input is presented, and the system’s output is compared with the ‘desired’ output. The connection weights are then adjusted so as to decrease the system’s error. The cycle is repeated – typically, many thousands of times – with each input being matched with a desired output. Eventually, the connection weights stabilize, and the system may be able to give the ‘correct’ output even for new inputs which it has never before encountered. One of the earliest and best-known applications of this procedure to language learning is Rumelhart & McClelland’s (1986) account of the training of a network to produce past tense forms of English verbs (for an update, see Plunkett, 1995). The procedure, it will be appreciated, rather closely models the psychologists’ category formation experiments. Thus in the psychologists’ experiments, we might suppose that at first subjects cannot make head or tail of the array of stimuli that they are presented with, and, like the neural network, give random responses. After repeated trials, in which feedback is provided, they increasingly come up with the ‘correct’ classification of the stimuli.

Unsupervised learning in artificial neural networks involves the automatic recognition of patterns and regularities in the input. Several aspects of linguistic structure have been subjected to this kind of procedure. Thus, Goldsmith (2001) proposes a heuristic for automatic morpheme segmentation, while other aspects of linguistic analysis are addressed in Broeder & Murre (2000). For example, for Gillis, Daelmans, and Durieux (2000), the issue is the learnability of word stress rules on the basis of syllable structure and segmental features, while for Shillcock et al. (2000) the problem is to identify words from a phonemic transcription of connected speech (from which, of course, the word spaces had been removed). A common technique in unsupervised learning involves the use of clustering algorithms (Manning & Schütze, 1999). Each stimulus is defined as a point in multi-dimensional space, and inputs cluster according to their relative closeness, with each new stimuli being ‘categorized’ in terms of the cluster it gets associated with. One of the best-known unsupervised procedures is the self-organizing maps of Kohonen (1982); a more sophisticated model has been developed by Kasabov (2002). Employing Kasabov’s ECOS (= ‘Evolving Connectionist Systems’) model, Morales & Taylor (2005) found that the unsupervised learning of small vocabularies, the sole input to the system being digitized ‘signatures’ of different pronunciations of the words, turned out to be remarkably robust at the testing phrase, that is, in correctly classifying new pronunciations of the words.

Under what circumstances might unsupervised learning take place in human subjects? One condition would be that the stimuli naturally cluster into so many categories. It might be the case, for example, that different sets of features co-occur in distinct sets of stimuli, or that a continuously varying feature has frequency-of-occurrence values that are bi-modally distributed over the stimuli. In such cases, the categories might be said to be ‘in the world’, in that the relevant categories can be identified in terms of feature correlations or feature maxima.

It goes without saying that the learner has to be able to perceive the features in question. Consider, in addition, the possibility the learner may be innately predisposed to respond to certain features, or to certain dimensions of the stimuli. In this case, the emerging categories would be a function of the system's perceptual mechanism, rather than feature correlation in the world. We can illustrate the issues on the categorization of colour. On the one hand, it could be argued that the colour solid represents a three-dimensional array of all possible colours (the three dimensions being hue, saturation, and brightness), with no natural boundaries or lines of segmentation. The colour solid does not naturally divide into so many categories. This aspect must be counterbalanced by the fact that not all the possible colours occur equally frequently in the environment. Regions in the colour space which dominate in the environment might therefore be good candidates for emergent categories. Research into the linguistic encoding of colour, however, has shown that different languages around the world tend to select their colour categories from a universal set of focal colours (Berlin & Kay, 1969). The focal colours are those which the human visual system is specifically attuned to respond to, such as red and green, blue and yellow in the first instance, and admixtures of these, such as orange, pink, and so on. The focal colours are the ones that tend to be lexicalized first, in spite of the fact that they may occur relatively infrequently in nature (Taylor, 2003b)

In light of the above remarks, let us now return to the learning of phonological categories. One of the most intensively studied features of the acoustic-phonetic signal is the role of Voice Onset Time (VOT) in the differentiation of different kinds of stops, such as voiced vs. voiceless, unaspirated vs. aspirated (Lieberman *et al.*, 1958; Lisker, 1978).¹² It has also been established that prelinguistic infants are highly sensitive to differences in the VOT continuum (Eimas *et al.*, 1971). Some scholars, including Eimas, have suggested that this fact alone may be sufficient to trigger the formation of the respective categories; there would, therefore, be grounds to claim that the categorization of stop consonants is driven by innate properties of the human perceptual mechanism. Complicating the situation, however, is the fact that different languages exploit the VOT dimension in different ways. To the extent that VOT defines language-specific categories, these categories presumably have to be learned from experience. But even within a single language, it may be inappropriate to refer to *the* VOT values which differentiate the different categories of stops. VOT depends on many variables, such as the place of articulation of the stop (VOT values for bilabials are, on the whole, shorter than for velars; Lisker & Abramson, 1964), the prosodic properties of the syllable, i.e. whether stressed and foot-initial, or unstressed, the overall speech rate, and whether in utterance-initial position, and so on. These variations are subtle and numerous, and native proficiency in a language requires that they be learned (Pierrehumbert, 2003).

Leaving aside these various sources of variation, let us consider the simplified case of stops in syllable- and foot- initial position, that is, in the onset position of stressed syllables, the kind of sounds, namely, that have been so intensively studied in the experimental literature over the past decades. Imagine two hypothetical languages, in which foot-initial VOT values between, say, -50 and +50ms, occur with more or less equal frequency. One language places the boundary between voiced and voiceless

stops around +5 ms, the other places the boundary between voiceless unaspirated and voiceless aspirated stops around +25 ms. It will be apparent that the unsupervised learning of the respective categories will be all but impossible. The learner would need the information that in the one language, VOT-values of +10 and +40 count as ‘the same’, in the other language they count as ‘different’. Unsupervised learning, however, would be feasible, if VOT values were bimodally distributed, clustering, for example, around +5 and +30. Frequency distribution of the stimuli would therefore naturally divide the stimuli into two categories. As it happens, VOT values in natural languages (in a given prosodic position) do indeed tend to be distributed in this way (Lisker & Abramson, 1964).

It is therefore entirely plausible that the phonetic categories distinctive of a particular language (such as the aspirated vs. unaspirated stops, or the various vowel categories) could be ‘seeded’ during the first years of life by the statistical properties of the input. Further exposure to the language will, of course, be needed in order to sharpen and refine these categories (Bohn 2000). There is evidence that this process may continue until well into the school years (Hazan & Barrett, 2000). Some additional aspects of this process are mentioned below.

(i) Although a single dimension (such as VOT for the stop consonants, or formant frequencies for the vowels) may be sufficient to seed the respective categories, further exposure may enrich the category representations through the accretion of correlated properties. While VOT has been shown to be reliable cue for different kinds of stop consonants, VOT is not the only dimension differentiating the syllable-onset stops in English (Lisker, 1978). The intensity and spectral properties of the burst, the rate of change of formant transitions, and even the pitch of the ensuing vowel tend to correlate with the aspirated/unaspirated distinction, thus providing additional, though possibly redundant, cues for the characterization and differentiation of the respective categories. For vowels, an additional differentiating aspect is variations in duration (Peterson & Lehiste, 1960), and even differences in inherent pitch. Thus, all other things being equal, the duration of the vowel in *sad* [sæd] is likely to be greater than the duration of the vowel in *said* [sɛ d].¹⁶

(ii) As acquisition progresses, the categories will become subject to internal organization. Members of the same category will come to be perceived as increasingly similar, while perceptual differences between neighbouring categories are increased. Kuhl (1991) in this context speaks of the ‘perceptual magnet effect’ – outlying members of a category tend to be ‘drawn in’ towards its prototypical centre. Thus, speakers become increasingly desensitized to differences between stimuli belonging to the same category, but readily discriminate stimuli which lie just on either side of a category boundary. These constitute the well-studied phenomenon of categorical perception, defined, by Harnad (2003) as a situation where “perceived within-category differences are compressed and/or between-category differences are separated, relative to some baseline of comparison”.

(iii) The increasing size of the learner's lexicon may also be a factor in phonological development (Beckman & Edwards, 2000). One might suppose that the ability to discriminate categories of sounds will entail that learners integrate these categories into their mental representations of words. Pater et al. (2004), however, report that infants who are able to discriminate *pin* and *bin*, *bin* and *din*, etc., were unable to associate these syllables with meaning differences in a word learning experiment. They explain this seemingly paradoxical finding in terms of the additional processing demands of word learning, involving the association of the acoustic stimuli with referential meaning. In early stages of language acquisition, therefore, words may well be represented in terms of their gross acoustic properties. As word learning gets under way, and the child's lexicon increases in size, more accurate lexical storage will be necessary. This will not only strengthen the mental representation of the phonological categories, it will also reinforce their differentiating potential.

(iv) A further factor in the acquisition of phonological categories is the various 'knowledge effects' that come into play. I address this issue in the next section.

V. KNOWLEDGE EFFECTS

I have given a tentative account of how the phonetic shapes of words, such as *coat* and *goat*, *ship* and *sheep*, might plausibly be learned in an unsupervised learning situation. This account, however, does not equate to the learning of phonemes, as these are traditionally understood. What our hypothetical learner will have acquired are allophones, or "phonetic equivalence categories" (Maye & Gerken, 2000: 532), that is, categories which comprise sounds which occur in particular phonological positions. The key characteristic of phonemes is "equivalence across contexts" (Pierrehumbert, 2003: 118). The phoneme, namely, is the level of representation at which *coat* and *goat*, *lack* and *lag*, *anchor* and *anger*, *bicker* and *bigger* differ with respect to the very same contrast, namely, /k/ vs. /g/. The words contain the 'same' sounds, albeit in different syllable and prosodic positions. Unsupervised learning might result in the acquisition of the properties of each of the above words, yet not deliver the insight that *coat* and *goat* differ in the same way as *lack* and *lag*. On what basis, therefore, can we say that *coat*, *lack*, *anchor*, and *bicker* all contain the 'same sound', namely /k/?

The standard structuralist answer to this question was that different sounds belong to a single phoneme category because of their similarity and their interchangeability. Referring to Z. Harris's (1951: 20) statement that "[i]t is empirically discoverable that in all languages which have been described we can find some part of one utterance which will be similar to a part of some other utterance", Hoijer (1958, cited in Heitner, 2005: 20) comments:

'Similar' here means not physically identical but substitutable without obtaining a change in response from the native speakers who hear the utterance before and after the substitution: e.g., the last part of 'He's in' is substitutable for the last part of 'That's my pin' (Hoijer, 1958: 573).

Drawing on the structuralist tradition, Quine (1987: 150) gave the following account:

Two distinguishable sounds belong to the same phoneme, for a given language, if switching them does not change the meaning of any expression in that language: such is the ordinary uncritical definition of the phoneme (Quine, 1987: 150).

Quine immediately modifies this in an attempt to exclude the controversial reference to ‘meaning’:

But meaning is a frail reed; surely the phonemes, the very building blocks of the language, are firmer than that. They are indeed, despite occasional misgivings to the point. There is an easy behavioral criterion of sameness of phoneme that presupposes no general notion of sameness of meaning. Two sounds belong to the same phoneme if substitution of one for the other does not affect a speaker’s disposition to assent to any sentence (pp. 150–151).

The claims made here are open to question on several counts. Consider, first, the issue of substitutability. Just as Pike (1947) queried whether linguists of his time really did pursue phonemic analysis without any reference to meaning, we can also ask ourselves whether anybody ever did perform the substitution tests. Nowadays, since the advent of digital signal processing, it is a relatively simple matter to cross-splice parts of recorded utterances. In earlier times, the experiment would have involved (literally) cutting up lengths of magnetic tape and sticking the bits together in a different sequence – a messy and time-consuming process at best, and prone to all kinds of errors and misjudgements. If such substitution experiments had been performed, the responses of native speakers might not at all have corroborated the phonemic analyses that the investigator was trying to validate. For example, if one cross-splices the initial /h/ sounds of *who* and *heat*, the resulting forms do not at all sound like *who* and *heat*, or even like English words at all. Or consider the initial and final consonants of a word like *tot*. If the final ‘t’ were to be glottalized – a rather frequent pronunciation in many accents – interchanging the initial and final segments would, if anything, produce a word heard as something like *ott*. Again, the two ‘t’s cannot reasonably be said to be substitutable. When linguists, whether professional like Hoijer, or amateur like Quine, made statements about ‘substitution’ as the basis of phonemic analysis, we are dealing, I suspect, with armchair experimentation, intended to give a spurious air of scientific grounding to the enterprise.¹⁷

With regard to phonetic segments, an important piece of knowledge concerns how these sounds are made – which articulators are involved, manner of airflow, and so forth. Thus, for English, the initial and final segments of *tot* both involve alveolar closure with no accompanying vocal fold vibration, even though the acoustic effects of the articulation are very different for onset and coda consonants. Knowledge of the articulation could therefore support the grouping of the initial and final consonants into a single category. Jusczyk, in fact, has argued that a major impetus for the emergence of phoneme categories could well be the need for the learner to coordinate perception and production.¹⁸

From the standpoint of word recognition, there is no need of an ability to detect the similarity in the initial portions of the words “big,” “beet,” “bop,” and “bun.” Nor is there any particular need for the speech perception system to extract any similarity between the way that the word “park” begins and the way that “tip” ends (although this ability is critical for learning to read English). However, in order to produce, and

reproduce, any of these items correctly on another occasion, it may be helpful to take note of any similarities in the articulatory gestures that are required to produce these (Jusczyk, 1997: 205).

A second source of knowledge concerns dialectal and stylistic variants. There is no such thing as the perfectly homogeneous linguistic community of Chomsky's (1965: 1) idealization. Even leaving aside dialectal variation, each speaker commands a range of stylistic varieties, and comes into contact with many different speaking styles. Observing that *cat* is variably pronounced [kæt^s], [kæt^h], the learner may come to group these different coda sounds as different kinds of /t/.

A third influence would be knowledge of the orthography. The flap in *city* might well be identical in articulation to the flap in *ready*. Knowledge of how these words are spelled, however, could cause the first to be categorized as a kind of 't', the latter as a kind of 'd'. Knowledge of morphological relations might also come into play. The perception of the flap in *madder* as being an example of /d/ rather than /t/ could be a consequence of the fact that the speaker knows that *madder* is derived from *mad*. Both these issues are extensively discussed in Mompeán (2004).

I have outlined some of the factors which might contribute to the emergence of the phoneme concept. The possibility still remains, however, that phoneme categories might be inventions of analyzing linguists, which play no role in the mental representations of linguistically naïve speakers. As Jaeger (1980: 233) put it, "even the most basic or self-evident" claims of theoretical linguistics need to be subjected to empirical investigation. A number of scholars, including Jaeger (1980) and Mompeán (2002: Experiment 3), have indeed attempted to demonstrate the psychological reality of the phoneme concept, with encouraging results. Thus, Jaeger found evidence that subjects classified various allophones and positional variants of /k/ into a single category, while Mompeán reported analogous findings for the allophones of /p/. It should be borne in mind, however, that both researchers employed a concept formation paradigm,¹⁹ in the supervised learning tradition, as described above. It cannot, therefore, be ruled out that the experimental subjects were simply able to solve the categorization puzzle that they had been presented with, with no implications that the subjects had prior mental representations of categories, nor, even less, that the categories played a role in the subjects' day-to-day linguistic performance.²⁰ On the other hand, the fact that all 9 of Jaeger's subjects, and all 20 of Mompeán's, were able to form the categories to criterion,²¹ would suggest that the subjects were indeed tapping into their mental representations of the respective categories, rather than constructing ad hoc categories in response to the experimental tasks.

VI. CONCLUDING REMARKS

As stated earlier in this paper, the phoneme concept is controversial. I have framed the above discussion around some of the controversies which were current during the heyday of Bloomfieldian structuralism, in the mid decades of the last century, concerning the criteria by which phonemes are to be identified. As is well-known, the advent of generative phonology, in the 1960's and 1970's, ushered in new controversies. Specifically, generative phonologists such as Postal (1968) and Chomsky & Halle (1968) queried the need for a phonemic level of representation at

all, proposing instead that a battery of ordered rules was able to generate the surface form of an utterance (roughly, the utterance in a narrow phonetic transcription) directly from a unique representation of each constituent morpheme, with no special theoretical status attaching to an intervening phonemic representation. Crucial to their argument for ignoring the phoneme was the fact that certain rules (e.g. of assimilation) sometime seemed to bypass the phonemic level altogether,²² while others appeared to create surface contrasts (i.e., minimal pairs) which did not correspond with intuitions about a phonemic level.²³ Even so, as Schane (1971) observed, the output of one set of rules – the morphophonemic rules – did correspond, by and large, with what would earlier have been called a phonemic representation, while the phonetic rules corresponded, by and large, with what would have been regarded as phoneme realization rules.

The generative phonology approach, it will be observed, was strictly ‘top-down’, in the sense that details of surface pronunciations were derived from more abstract representations, rather than vice-versa. Generative phonology thus inverted the ‘bottom-up’ programme of the Bloomfieldians. From the perspective of the child acquiring an ambient language, a top-down approach can be viable only if one makes the gratuitous assumption that the abstract units are already available to the learner, namely, through genetic inheritance (Lindblom, 2000). This is a dubious proposition, if only because of the language-specificity of the more abstract categories (such as the phonemes). If we make – as I think we should – minimal assumptions concerning the learner’s initial state, we are obliged to consider seriously the bottom-up perspective. This has been my aim in this paper [].

Appendix C 7

The Expression of Negation in British Teenagers' Language: A Preliminary Study

Ignacio M. Palacios Martínez

Abstract

This article, based primarily on data from the Bergen Corpus of London Teenage Language (COLT), is concerned with the description of those features of the negative polarity system that can be regarded as particularly characteristic of teenage language. A comparison is drawn with the expression of negation by adults, looking at a subcorpus of data extracted from the Diachronic Corpus of Present-Day Spoken English (DCPSE). Findings are classified into three main categories: syntactic, lexical, and pragmatic. At the syntactic level, teenage spoken language is characterized by a high frequency of negatives, a large number of negative concord structures, a common use of *never* as a single negator in the past, and a particular way of intensifying negative statements. Teenage spoken lexis shows the innovative use of some new negative items and a high proportion of negative polarity idioms. From a pragmatic perspective, the language of the teenagers in the corpus is notable for avoiding hedges and for being extremely direct and straightforward. Adolescent speakers also tend to use negatives as a kind of game to contradict their interlocutors. The article concludes by arguing that the expression of negation in teenage language is best understood within the framework of the interaction of cognitive and sociological variables.

Keywords

negation, teenage language, negative concord, negative polarity, pragmatics of negation

It is generally acknowledged that teenagers play a crucial role in language development and change. In comparison to the more stable language production typical of adult speakers, teenagers' language tends to introduce innovations (Labov 1972; Romaine 1984; Eckert 1988; Kerswill 1996; Andersen 2001; Rodríguez 2002; Stenström, Andersen, & Hasund 2002; Tagliamonte 2005). These changes often become incorporated over time in the language of adults.

The special code of British adolescents (Rodríguez 2002; Stenström, Andersen, & Hasund 2002) includes a variety of features worthy of study, including the use of *like* as a quotative marker (*I was like oh come Carla hurry up*); a high volume of slang and taboo words (*fucking, shit, bloody, crap*); many vague words and expressions, including placeholders (*thingy*), quantifiers (*loads of, sort of*), and general extenders (*and stuff, and all, or whatever*);¹ a large number of noncanonical tags (*innit, yeah, right, eh, okay*); and the tendency to use *right* and *well* as adjective intensifiers (*They've been right bastards to you; I was well drunk*). Adolescence is a turning point in life, as the individual matures both physically and cognitively, and this has a direct influence on language acquisition and development. However, cognitive factors alone cannot explain the configuration of children's and adolescents' language; the

development of communicative competence in this period involves the interaction of both cognitive and sociolinguistic variables, such as age, gender, style, and ethnic and social backgrounds (Romaine 1984). Moreover, the language of adolescents may help us understand certain features of the evolution of a language in general since particular aspects of the expression of teenagers are later incorporated in the language of adults. This is particularly so at the lexical level.

Adolescents are responsible for new developments at almost all levels of the language, from phonology to syntax and discourse. It has been suggested in the literature, for example, that teenagers may not only favor new phonological variants (Horvath 1985) and the reduction of dialect differences at a regional level (Kerswill 1996, 2003; Kerswill & Williams 1997; Cheshire, Kerswill, & Williams 2005) but that they also promote grammaticalization processes and structural reanalysis (Andersen 2001:9).² According to Romaine (1984:104) and Rodríguez (2002:46), teenagers tend not to comply with the standard rules of both language and society and are prone to using highly stigmatized forms.

The above tendencies have been observed not just in English but across a variety of languages. Several contrastive and comparative projects have been carried out with English, Spanish, and Norwegian, taking as their bases corpora provided by teenagers and adolescents. This is the case with COLT (Bergen Corpus of London Teenage Language), COLA (Corpus oral de lenguaje adolescente, i.e., Oral Corpus of Adolescent Language) and UNO (Ungdomsspråk och Språkkontakt i Norden, Nordic teenage language).³ Using two of these corpora, Stenström (2000 2005a, 2005b) has studied the use of intensifiers, tags, and taboo words among girls from London and Madrid. In comparing adult versus teenage language, Rodríguez (2002:37) explains the expressive lexical resources used by Spanish adolescents in terms of three main processes: transfer of meaning or semantic change, code change, and register change. In a similar way, Casado (2002) has focused on semantic and morphological features of this language, while Herrero (2002) has discussed its syntactic characteristics.

In spite of all the work conducted on the language of adolescents, there are still vast lacunae in knowledge of the syntax and pragmatics of negative polarity in this particular register. However, in general linguistics, the question of polarity, and negation in particular, has been widely discussed. From the classic studies of Jespersen (1917), Poldauf (1947), Klima (1964), Givón (1978), and Horn (1989), who were mainly concerned with syntactic features or particular negative types, such as affixal negation, or even with philosophical issues regarding the meaning of negation in the case of the latter two, negation has received increasing attention especially over the past decades, and interest shows no signs of abating. Recent work of particular relevance for this study includes Tottie (1991), Haegeman (1995), Tieken-Boon van Ostade, Tottie, and van der Wurff (1999), Anderwald (2002), Mazzon (2004), and Iyeiri (2005). Tottie's work is especially relevant because it can be regarded as the first corpus-based study on the use of negation in contemporary English. Haegeman

provides new insights into the syntax of negation within a generative framework. Tieken-Boon van Ostade, Tottie, and van der Wurff offer different analyses on negation in the history of English with particular attention to multiple negation, affixal negation, the meaning of *never*, and negative raising. Anderwald begins by looking at the syntax and morphology of negation in standard modern English and then concentrates on the study of negation in nonstandard systems, with an emphasis on those aspects of nonstandard negation that are specific to individual regions of Britain. Mazzon's book combines both synchronic and diachronic complementary analyses of negation, including negative types outside the standard variety of English. Finally, Iyeiri's collection of papers discusses negative concord in British English dialects in general, Tyneside English, and African American Vernacular English. Despite the growing literature on negation, there is still need for research into specific areas of negative polarity associated with particular varieties, genres, and registers and especially with the pragmatics of negation. In this respect, it could be hypothesized that the language of British teenagers may be a good case in point, as negation in this variety could be particularly interesting. Furthermore, the results obtained here will contribute to a better understanding of the behavior of negation in general English. If we see how negative polarity works in a particular register, the whole picture of negation will be consequently more thoroughly characterized and clarified.

This article addresses those areas of use that, at first sight, seem to differ most widely from the use of negation in adult mainstream British English: frequency of negation; negative types; negative intensification; negative concord; particular use of *never*, both as a negative intensifier and as a form negating something in the past; and uses of negative expressions. Due to limitations of space, forms, such as *ain't*, *innit*, *int*, *nope*, and *nah*, are not included in the present study.⁴

The findings reported below show that to understand the expression of negation by teenagers it is necessary to consider psychological and sociological variables. For example, psychological factors in the development of adolescents are likely responsible for their tendency to be categorical in their expression and to avoid hedges (Romaine 1984; Rodríguez 2002). The condition of their age also makes them prone to experimenting and playing with language, and this is at times reflected in interactions constructed by a succession of negatives in which one speaker systematically contradicts another. Sociological variables, such as type of education, ethnicity, cultural and social background, and degree of formality of the situation, play an important role in both the grammar and the lexis of the negatives used by London youths.

Method

This article forms part of a general study of the spoken language used by young people in Britain with special reference to the system of negation. The data have been taken from the COLT corpus. Compiled in 1993, this corpus, which is part of the British National Corpus (BNC), consists of 431,528 words from a total of 377 spontaneous conversations produced by teenagers from thirteen to seventeen in the

London area, including the boroughs of Tower Hamlets, Barnet, Camden, and Hackney and the county of Hertfordshire. These conversations together represent roughly one hundred hours of recorded speech. Although most of the informants can be classified as middle adolescence, some teachers and relatives of some of the informants also speak, although their participation is very limited.

Although COLT was compiled in an attempt to represent language produced by British adolescents, all the speakers are from the London area, with its own geographical, social, and ethnic variables. The London boroughs represented in the corpus also have substantial numbers of children from ethnic minorities, and this itself could have a bearing on the type of English used. Thus, this corpus should not be regarded as fully representative of general adolescent British English but rather of London teenager speech. Nevertheless, some of the tendencies observed in the analysis here, especially in the area of syntax and discourse, could be understood as characteristic of general teenage British English and even of adolescents' language. As mentioned above, several studies have shown common features of the expression of adolescents across different languages. Furthermore, features of London English, pronunciation in particular, seem to be spreading throughout the country (Williams & Kerswill 1999; Foulkes & Docherty 1999), so taking London as a starting point might be a useful means of assessing aspects of teenager language in British English more generally.

With the purpose of comparing the findings here with adult mainstream British English, data extracted from COLT are compared to comparable samples taken from the Diachronic Corpus of Present-Day Spoken English (DCPSE). To ensure the best comparison, texts classified as informal face-to-face conversations (403,844 words) and assorted spontaneous speech (21,675 words) were selected from DCPSE, for a total of 425,519 words. The DCPSE is sampled from both the London Lund Corpus and International Corpus of English-Great Britain (ICE-GB). In the case of the data selected for the present study, 75 percent are from ICE-GB, which was recorded in the early 1990s, that is, at a similar time as COLT. The rest of the material was recorded between 1958 and 1977. To contrast the findings from these two corpora, comparisons on some occasions are made with the findings of other studies, such as Tottie (1991) and Biber (1988), and the Longman corpus.

For the analysis, I regarded as negative, in the first place, those grammatical items that are fully negative from both a syntactic and a semantic perspective. These constructions fall into nine categories:

- (a) The particle *not*, including enclitic forms of operators and modal verbs, such as *hasn't*, *haven't*, *isn't*, *aren't*, *ain't*, *don't*, *didn't*, *mustn't*, *won't*, *can't*, *couldn't*, *mightn't*, *needn't*, *shouldn't*, *wouldn't*, and so on:
 - (1) She *won't* give me a bit of her flake. (CO/B136501/138)⁵
 - (2) I *ain't* telling the truth. (CO/B133101/35)

- (b) *not* as a modifier to several determinatives (*much*, *many*, and *enough*):
 - (3) *Piss off. I suppose. There's not much point in asking you.* (CO/B137701/35)
- (c) *never* as head of an adverb phrase:
 - (4) *Keith lost it so we never sent it.* (DC/DIB03/280)
- (d) *no* as a determiner in a NP structure or modifier in the structure of comparative adjective phrases and AdvPs:
 - (5) *You've no idea what it's like.* (DC/DLB16/0147)
 - (6) *I'm no longer Peter's footman.* (DC/DLB16/0582)
- (e) *none* as head in a NP structure or modifier in the structure of comparative AdjPs and AdvPs preceding *the*:
 - (7) *I ain't telling you no more cos I don't know none.* (CO/B135805/138)
- (f) *nobody*, *nowhere*:
 - (8) *Basically we've got nowhere to sit this lunch time.* (CO/B133901/101)
 - (9) *Nobody likes birch trees.* (DC/DIB20/0109)
- (g) *neither*:
 - (10) *by the look of things neither has Mr <name>.* (CO/B141602/51)
- (h) *nor* and *nothing*. In the case of the latter, alternative forms transcribed in the COLT corpus as *nuffink* and *nuffin* were also considered:⁶
 - (11) *Members of the Tory party in their constituencies have no say whatsoever nor does big business.* (DC/DIB8100/94)
 - (12) *She don't buy nuffink. Emma's a right pain and a wimp.* (CO/B135306/222)
- (i) Sentence pro form *No* and its variants in the corpora, such as *nah*, *nope*, *na*, represented by upper-case N to distinguish it from the determiner:
 - (13) *You don't mind do you? Nah, I didn't think you would.* (CO/B140601/327)
 - (14) A: *Oh he wouldn't even go out with Sherry yet and like, he wouldn't even talk to her yeah and like she's in the fucking same school er er ...*
 B: *I think she <unclear>. Nope.* (CO/B139614/116-117)

The sentence pro-form *No* functions grammatically as a sentence, whereas all the other forms are intrasentential. Particular negative forms transcribed in the COLT corpus in a special way, often imitating the way they are pronounced, were also considered. This is the case with *dunno* (*dun know* > *don't know*), as in,

- (15) *I dunno a Hitler kind of approach.* (CO/B142706/2)

Lexical words with an inherent negative meaning such as *fail*, *prevent*, *refrain*, *eliminate*, *deny*, *refuse*, and *stop* were not included in the analysis for two reasons. First, in terms of syntax these items form part of sentences expressing positive polarity. Second, it is almost impossible to come up with a complete inventory of them, and as a consequence, it would be extremely difficult to retrieve them all automatically with a corpus of this size. Cases of incomplete or approximate negation with *few*, *barely*, *seldom*, *rarely*, *hardly*, *scarcely*, and *little* were also discarded when

considering the general frequency of negation. Instances of subclause, local, or constituent negation and morphological or affixal negation were also ignored when assessing the frequency of negation in global terms since the aim was to restrict the analysis to full negative sentence contexts, not only from a semantic point of view but also from a syntactic one. A study of these negatives is reserved for an independent section because of their distinctive features.

Throughout the analysis I followed Tottie (1991) in her typology of negatives, distinguishing between sentence and intrasentential negation, between affixal and nonaffixal negation, and between sentence and constituent negation.⁷ The frequency of negation was calculated on the number of occurrences of the negative items per 100,000 words; percentages and normalized frequencies were calculated when necessary.

For the analysis of the COLT data, I first manually examined about one-third of the total conversations to gain a working familiarity with the focal constructions and different speakers involved. Once I was aware of the potential variables and factors that could have a bearing on the study, I used the application Concapp4 for an automated analysis of the corpus. For the DCPSE sample, I used the tools provided by the system itself, known as ICECUP (ICE Corpus Utility Program). Although Concapp4 and ICECUP facilitated part of the work, it was then necessary to filter manually the resulting data to make sure all occurrences met the conditions required. This entailed not only the analysis of each example individually but very often the context in which these examples appeared as well.

Results

Frequency of Negation

My preliminary analysis of the COLT data had clearly indicated that the number of negative expressions was extremely high, even higher than in previous studies on the frequency of negation in English, such as Biber (1988), Tottie (1991), Palacios Martínez (1995), Biber et al. (1999), and Hidalgo Downing (2003), all of which find that negation is far more common in speech than in writing. This high frequency of negation can be explained by the fact that certain linguistic functions of negation are speech specific; this, for example, is the case with explicit denials, rejections, support givings, and repetitions.⁸ Negation, then, is characteristically higher in interaction than in writing.⁹

In fact, there were extracts of this corpus where exchanges contained series of negative items, one after the other, as in example (16) below. This issue is further discussed when considering the pragmatics of negation.

(16) A: [this geezer from Bedlam yeah] got stopped the other day in this car
yeah, he was pissed, he was tripping and he was speeding yeah, no not,
no licence, no tax, [no ruddy insurance yeah]

B: [<nv>laugh</nv>]> right he's getting put away. (CO/B133705/118)

The high number of negatives, the tendency to accumulate them in the same speech unit, the use of dialectal forms typical of this variety (*ain't*, *innit*, *nope*, *nah*, *dunno*, *nuffink*), and the particular communicative and pragmatic effect conveyed by some of these structures all suggested from the outset that the teenage discourse here was especially interesting in terms of the expression of negation. These findings seem to confirm my preliminary hypothesis on the expressive richness of negation in British adolescents.

Table 1 compares the total number of negatives in COLT, as representative of London teenagers' speech, and in the subset of DCPSE, representing general adult spoken British English. The overall count is most illustrative: 14,305 versus 9,722 occurrences.

A total of 1,332 examples were discarded from COLT and 1,392 from DCPSE.¹⁰ Frequency of negatives per 100,000 words are 3,301.7 in COLT versus 2,273.8 in DCPSE. The difference is statistically significant ($\chi^2 = 788.72$, $df = 1$, $p < .001$). The average obtained here for adult speech differs from that reported by Tottie (1991:17), who records a figure of 2,760 per 100,000 words, on the basis of a small sample extracted from the London Lund Corpus. Biber et al. (1999:159), on the other hand, report a frequency of 2,220 per 100,000 words, almost identical to my findings here. The divergent nature of the corpora, plus the different criteria used for the identification of the negatives, may make inevitable some variation in findings in different studies. What is clear in the present study, however, is that my general hypothesis is confirmed: British teenagers' language, as analyzed here, exhibits a higher number of negatives than the speech of adults. Verifying a higher number of negatives in the sample of adolescents' language selected as compared to the expression of adults is not enough. It is necessary to examine in close detail how these differences affect the expression of negation in both corpora with particular reference to two of the main negative types: subclause and affixal or morphological.

The number of subclause negatives is very limited, especially as compared to the proportion of intrasentential negatives mentioned above. There are forty-three cases in COLT and thirty-seven in DCPSE. Several distinct patterns of subclause negation were found in each corpus, and these are laid out in Table 2 together with their frequencies in both corpora. Differences between teenagers' and adult language, however, are not significant. Group 1 is the most important of these subclause negatives in both samples. It includes a number of negatives introduced by a verb such as *tell*, *prefer*, *decide*, *attempt* followed by *not* and an infinitival form. In these structures the scope of the negative is outside the main verb but within the scope of the nonfinite

Table 1. Total Number of Full Negatives in Bergen Corpus of London Teenage Language (COLT) and Diachronic Corpus of Present-Day Spoken English (DCPSE; Face-to-Face Conversations and Assorted Spontaneous Speech)

Negative word	COLT (431,528 words) number of tokens	Relative frequency per 100,000 words	DCPSE (425,519 words) number of tokens	Relative frequency per 100,000 words
not	2,416	559	1,785	419
<i>no</i> as determiner	343	79	334	78
or modifier				
Pro-form <i>no</i>	3,504	810	1,936	455
<i>nope</i>	3	0.6	0	—
<i>nah</i>	58	13	3	0.7
<i>ain't</i>	280	64	1	0.2
<i>isn't</i>	154	35	461	108
<i>aren't</i>	36	8	65	15
<i>wasn't</i>	210	48	270	63
<i>weren't</i>	101	23	70	16
<i>don't</i>	2,882	667	1,771	416
<i>doesn't</i>	334	77	360	84
<i>didn't</i>	716	165	576	135
<i>hasn't</i>	93	21	84	19
<i>haven't</i>	410	95	312	73
<i>cannot</i>	15	3.4	11	2.5
<i>can't</i>	937	217	576	135
<i>won't</i>	315	72	126	29
<i>shan't</i>	1	0.2	9	2
<i>mightn't</i>	1	0.2	2	0.4
<i>wouldn't</i>	266	61	239	56
<i>shouldn't</i>	52	12	46	10
<i>nothing/nuffink</i>	254	58	150	35
<i>nowhere</i>	13	3	14	3
<i>no one</i>	85	19	19	4
<i>none</i>	30	6	24	5
<i>never</i>	340	78	358	84
<i>nor</i>	28	6	11	2
<i>nobody</i>	51	11	93	21
<i>neither</i>	12	2.7	16	3
<i>dunno</i>	365	84	0	—
Total	14,305	3298.7	9,722	2,273.8

verb. The patterns in groups 2 and 3 are quite similar in the sense that they are introduced by the prepositions *with* or *for* and followed either by a negative word, such as *nowhere* and *nothing* in group 2, or *no* and a noun phrase in group 3. Only the

elements that come after the preposition are within the scope of negation. Group 4 includes a total of thirteen subclause negatives introduced by the modal idiom *had better*. Group 5 is represented by only two expressions occurring in the language of

Table 2. Subclause Negatives in Bergen Corpus of London Teenage Language (COLT) and Diachronic Corpus of Present-Day Spoken English Diachronic Corpus of Present-Day Spoken English (DCPSE; Face-to-Face Conversations and Assorted Spontaneous Speech)

Subclause negative type	COLT (431,528 words) number of tokens	DCPSE (425,519 words) number of tokens
1	2	3
Group 1: main verb (<i>tell/prefer/try/decide/attempt/advice/try/seem/appear</i>) + <i>not</i> + infinitive/-ing verbal form Examples I prefer <i>not to predict</i> It's me that I told him <i>not to go</i> I'll attempt <i>not to turn this off</i>	16	12
Group 2: preposition (<i>with/for</i>) + full negative words (<i>nowhere/nothing</i>) Examples Her Mum gives, her Mum gave her thirty pounds one Saturday <i>for nuffink</i> right We found a space <i>with nothing</i>	8	4
Group 3: preposition (<i>with/for</i>) + <i>no</i> + noun Example There's nothing worse in life than getting to old age, or getting anywhere <i>with no money</i>	7	5
Group 4: <i>had better</i> + <i>not</i> Example You'd <i>better not</i> come in my door.	7	6
Group 5: adjective phrase + <i>not</i> + infinitive verbal form Examples You are <i>fool not to avoid</i> it I shall be <i>careful not to draw</i>	2	9
Group 6: idiomatic phrases (<i>no fuck</i>) Example Who's got <i>no fuck</i> all commonsense?	2	0

1	2	3
Group 7: when + <i>not</i> + infinitive verbal form Examples I choose <i>when not to shut up</i> the thing about speaking is to know <i>when not to speak</i>	1	1
Total	43	37

teenagers: an adjective phrase followed by *not* and an infinitival verbal form. We notice in this case that the frequency of these forms is particularly higher in the language of adults. We notice in this case that the frequency of these forms is particularly higher in the language of adults. Groups 6 and 7 are rather marginal, including idiomatic expressions, such as *no fuck* in the case of the former and clauses introduced by *when* followed by an infinitive in the negative in the latter.

Affixal or Morphological Negation

As before, in the analysis of affixal or morphological negation and, more particularly, in the consideration of negative prefixes and suffixes, I followed Tottie (1991:45-47). The proportion of affixal negatives is quite limited in COLT, with a total of 222 instances in 431,528 words (114 suffixes + 108 prefixes), as compared to a total of 331 instances in 425,519 words (187 suffixes + 144 prefixes) in DCPSE. The relative frequencies are 51 and 75 per 100,000 words, respectively. This is a significant difference ($\chi^2 = 19.79$, $df = 1$, $p < .0001$). This difference might be explained by the internal organization of the corpora and by questions of register. The language of teenagers is more spontaneous, full of colloquial and slang expressions, and less formal than that of adults (Romaine 1984; Rodríguez 2002; Stenström, Andersen, & Hasund 2002). Affixal negation has long been associated with written and formal varieties of language (Zimmer 1964; Marchand 1969; Tottie 1991; Palacios Martínez 1995), so this low proportion of affixal negatives identified could be easily related to the informal nature of the language of teenagers.

Table 3 below shows that, broadly speaking, the distribution of the negative suffixes follows similar trends in the two corpora. The two items *unless* and *without* account for almost 79 percent of the tokens in COLT and 84 percent in DCPSE, while the suffix *-less* was reported on twenty-four and twenty-nine occasions respectively, that is, about 21 percent and 16 percent of the general count.¹¹ The adjectives *useless*, *pointless*, and *hopeless* are in this order the most common in both corpora, although their frequency varies: seven, four, and three occurrences in COLT versus eleven, seven, and four in DCPSE. Some lexical items of this type occur only in one corpus. The adjectives *mateless*, *gormless*, and *dickless* are, for example, found only in COLT, while *endless*, *faultless*, *timeless*, and *colourless* are found only in DCPSE.

Table 4 shows the distribution of negative prefixes in the two corpora. In both corpora the prefixes *un-* and *in-* are the most recurrent.¹² *Non-* is the least frequent in both cases, although in DCPSE eighteen words contain it, among them *non-stop* and *nonsense*.¹³

The following table (Table 5) shows those lexical items containing a negative prefix with the highest number of occurrences in the two corpora.

These data indicate that there are a higher number of words containing a negative prefix in the language of adults than in that of teenagers (106 vs. 72 items). The prefix of Germanic origin *un-* is much more common in both samples than the Latin origin prefix *in-*. Furthermore, some lexical items such as *immature* and *illiterate* are much more frequent in the language of adolescents. The opposite happens with words such as *impossible*, *unlikely*, *unusual*, *unfortunate*, and *unbelievable*, which stand out for being much more popular among adults. Moreover, there are even some words such as *uncertain*, *unnecessary*, and *inefficient* which are exclusive to

Table 3. Distribution of Negative Suffixes in Bergen Corpus of London Teenage Language (COLT) and Diachronic Corpus of Present-Day Spoken English (DCPSE; Face-to-Face Conversations and Assorted Spontaneous Speech)

Negative suffix	COLT (431,528 words) number of tokens	DCPSE (425,519 words) number of tokens	Total
<i>without</i>	48	96	144
<i>unless</i>	42	62	104
<i>-less</i>	24	29	53
Total	114	187	301

Table 4. Distribution of Negative Prefixes in Bergen Corpus of London Teenage Language (COLT) and Diachronic Corpus of Present-Day Spoken English (DCPSE; Face-to-Face Conversations and Assorted Spontaneous Speech)

Negative prefix	COLT (431,528 words) number of tokens	DCPSE (425,519 words) number of tokens	Total
<i>un-</i>	76	84	160
<i>in-</i>	29	42	71
<i>non-</i>	3	18	21
Total	108	144	252

Table 5. Word Frequency with a Negative Prefix in Bergen Corpus of London Teenage Language (COLT) and Diachronic Corpus of Present-Day Spoken English (DCPSE; Face-to-Face Conversations and Assorted Spontaneous Speech)

Negative prefixal items	COLT (431,528 words) number of tokens	DCPSE (425,519 words) number of tokens	Total
<i>impossible</i>	7	23	30
<i>unlikely</i>	5	16	21
<i>unusual</i>	5	15	20
<i>unfortunate</i>	4	11	15
<i>immature</i>	12	3	15
<i>unbelievable</i>	3	9	12
<i>unfair</i>	5	5	10
<i>unhappy</i>	3	6	9
<i>illiterate</i>	6	1	7
<i>irrelevant</i>	2	5	7
<i>illegal</i>	2	5	7
<i>uncomfortable</i>	4	2	6
<i>undo</i>	5	0	5
<i>undress</i>	4	1	5
<i>uncommon</i>	4	1	5
<i>unjust</i>	1	3	4
Total	72	106	178

the language of adults, the opposite being true for *undo*, for example, which is exclusive to the teenager's talk.

Teenagers sometimes tend to use innovative or nascent forms and phrases in their speech. We find adjectives like *uncool* and *unscrewable*; *uncool* is relatively well established in colloquial speech, denoting the opposite of being fashionable or trendy, as (17) illustrates.

(17) As if it matters they have to get off the train with a cigarette in their mouth or they are *uncool*, some shit like this. (CO/B139201/129)

Unscrewable as seen in COLT refers to something that has been carefully planned and which cannot go wrong. In (18), a couple of teenagers are deciding about the different things they could be doing when going out together. They mention several possibilities and then one of them closes the discussion by claiming categorically that everything is going to work out "because it is all unscrewable."

(18) A: And we could go back up. Or we could go into d'ya know Enfield Town?

B: Yep.

A: Shit.

B: What?

A: I mean we could go back up and go into Ashpoles and then just go down <name> Park with er black widows and just blow the shit out of everything. Shoot the little kids.

B: But we do if I do get the <unclear> diablo I'll show you you know. It's all *unscrewable* the whole thing practically. (CO/B141405/461)

Consider also (19):

(19) He is being *unfuckingtouchable*, you imagine. (CO/B142105/369)

Here the speaker inserts the intensifier between the negative prefix and the base form of the word. This is also found with the negative prefix *non-* as in,

(20) A: Well you're not gonna tape anything!

B: I am. All through music, *non fucking* stop. My only thing in life will be, for the next hour and forty minutes, fuck, I live to tape, okay? (CO/B132404/3)

The taboo word *bloody* is also used very frequently with an intensifying value by teenagers, although no examples of infixation with this form are recorded. These cases could be analyzed as examples of expletive lexical infixation, a morphological process that is quite common in colloquial speech (McMillan 1980; McCarthy 1982; Adams 2004; Yu 2007). It is important to mention that in DCPSE no instances of this kind were found. Although the item *fucking* occurs in this corpus on twelve occasions, most of the times with an intensifying function (*fucking hell*, *fucking weak*, *fucking yellow*, *fucking ambitious*), it never takes the form of an infix.

This particular way of intensifying language is complemented by other resources used by teenagers to accentuate and heighten meanings that are already negative. The following section discusses this issue at length.

Negative Intensification

Intensification is employed as a linguistic resource to convey the message more clearly and to strengthen the speakers' position as well as their attitude toward what they are saying (Bolinger 1977). The expression of negative intensification in general standard English has been studied extensively (Jespersen 1917:17; Bolinger 1977:122; Quirk et al. 1985:785; Downing & Locke 2005; Tottie 1991; Palacios Martínez 1996). Most of these accounts can be applied to youth language, although several studies have focused particularly on the general intensifying strategies used by adolescents. Erman (1997, 1998) looks at *just* as an emphasizer, and Stenström (2005a) considers *well* as an intensifier. Such studies underline the tendency of adolescents to strengthen their statements in fairly overt ways.

In keeping with this, my first prediction was that teenagers would resort more often than adults to intensifying resources in the conveying of negation to make their speech more credible and to lend more force to their message. With this hypothesis in mind, a comparison was drawn between the language of teenagers and adults as regards the mechanisms used to intensify negative sentences. Attention was paid to intensifying expressions with negative import, such as *at all*, *no way*, *a/one bit*, *in the least*, *in the slightest*, *not even*, and negative intensifying expressions formed in combination with certain verbs, which could be classified as figurative idioms

(Palacios Martínez1999) or restricted collocations (*not be bothered, not have a clue, not have a chance, not give a shit/a toss/a fuck*, etc.). The results for the two corpora are laid out in Table 6.

Strikingly, no important differences are noted between the two groups, contrary to the initial hypothesis. However, the partial figures for group 1 and group 2 (153 vs. 248 and 155 vs. 67, respectively) clearly indicate that teenagers prefer to use idiomatic expressions while adults opt for negatively oriented polarity sensitive items (NPIs). Furthermore, it is also the case that the linguistic strategies used differ from one group to the other, in two key ways: a number of expressions with negative import and a set of negative intensifying expressions formed in combination with certain verbs.

In COLT, these expressions with negative import are represented almost exclusively by *at all*, *no way*, and *a/one bit*. No instances are found of those alternative, common negative intensifiers, such as *in the least*, *in the slightest*, *by any means*, which are perhaps more formal in tone and which are certainly encountered in the speech of adults, although not with great frequency.

Table 6. Negative Intensification in Bergen Corpus of London Teenage Language (COLT) and Diachronic Corpus of Present-Day Spoken English (DCPSE; Face-to-Face Conversations and Assorted Spontaneous Speech)

Negative intensifying strategy	COLT (431,528 words) number of tokens	DCPSE (425,519 words) number of tokens
Group 1: Intensifying expressions with negative import		
<i>at all</i>	97	213
<i>no way</i>	27	14
<i>a/one bit</i>	3	2
<i>by any means</i>	0	1
<i>in the least</i>	0	2
<i>in the slightest</i>	0	1
<i>not even</i>	26	15
Subtotal	153	248
Group 2: Negative intensifying idiomatic expressions	155	67
Total	308	315
Relative frequency per 100,000 words	71	74

The locution *no way*, either in the middle of a sentence or as a reply to a previous question or request, is particularly common in the teenagers' repertoire, especially as compared with adult language. In COLT it is recorded on twenty-seven occasions and only fourteen times in the DCPSE subcorpus. From a total of twenty-seven examples in the COLT corpus, in only four of them is it used in the middle of the sentence, often collocating with existential *there* sentences, as in (21):

(21) Thing is there's *no way* Gemma and <name> are gonna be be allowed to stay upstairs when they've got boys downstairs. (CO/B142302/62)

In the rest of the occasions, it is an intensifying negative response expression as in (22):

(22) A: Do you fancy oi Zoe, do you still fancy Steven?

B: No way!

A: Eeeh- that's what you said last time. (CO/B140601/382)

In contrast with the preceding expression, *at all* is much more common in DCPSE.

The negative intensifying expressions formed in combination with certain verbs could be classified as figurative idioms or even as restricted collocations (Cowie, Mackin, & McCaig 1983) since one of the components may not be used with its literal meaning. Huddleston et al. (2004:823) classify them as NPIs. The data obtained clearly indicate that teenagers make use of a greater number of such structures than adults. The following examples are characteristic of the teenagers' speech, yet are not so regularly found in adult language:

(23) I haven't got a piss boy. (CO/B134901/113)

(24) I don't give a fuck! (CO/B132503/38)

(25) Oh, I don't give a shit. (CO/B133701/190)

In sum, my initial premise regarding the frequency of negative intensifying structures in adolescents' discourse is not confirmed; no differences are recorded between the speech of adults and that of teenagers in this respect. However, it is observed that teenagers resort to particular strategies to strengthen negative messages: common use of the locution *no way* as a response form to a previous statement or request and a high proportion of intensifying negative polarity idioms.

This leads us to the discussion of another distinctive feature aspect in the expression of negation by teenagers that here shows very interesting data: negative concord.

Negative concord involves the presence of two or more negatives in the same clause which do not cancel each other out (Huddleston et al. 2004:845). Consider the following:

(26) He *ain't* got *no* water left. (CO/B133901/184)

(27) It *don't*, it *don't* look *no* different to me. (CO/B135207/58)

(28) Third base he *don't* know *nothing* man! (CO/B135303/1)

This feature is typical of nonstandard varieties of English across the world (Huddleston et al. 2004:847) and is found in almost all nonstandard dialects of British English (Edwards & Weltens 1985:106; Anderwald 2005:118). It is also particularly noticeable in the case of London teenage speech. Here the presence of negative concord is restricted to the co-occurrence of a clause negative form, such as *not*, together with a negative quantifier within the scope of the negative. This is the case with examples (26) and (27) above. Alternately, a negative quantifier such as *nobody* or *nothing* can be used together with a sentence negator, as in (28) above, where *nothing* occurs within the scope of *not*. Few examples of multiple negatives were recorded in the present data.¹⁴

In the analysis of negative concord, I followed Huddleston et al. (2004), Biber et al. (1999), and especially Anderwald (2002,2005) in the syntactic characterization of this type of structure. To arrive at a percentage of actual versus possible occurrences, a search was made for those negative elements considered in this study and the cooccurrence of these forms with other negative elements that would be equivalent to standard negative expressions containing only one negative element. This means that multiple combinations of these negative items were retrieved and examined, although I paid special attention to those examples where I identified negative concord structures that in standard English would occur with a single negative item. In COLT the total number of possible examples in which I could find variation was 687; out of these 158 were cases of negative concord. That is, in 23 percent of all cases, negative concord constructions were present. This proportion is considerably higher than that reported by Anderwald (2005:118), who records a 14 percent global average

Table 7. Distribution of Negative Elements in Negative Concord Structures in the Bergen Corpus of London Teenage Language (COLT)

Second/first element	<i>n 't/not/dunno</i>	<i>ain 't</i>	<i>never</i>	<i>hardly</i>	<i>no</i>	Total
<i>nothing/nuffink</i>	45	4	—	—	7	56
<i>no</i>	61	23	—	—	—	84
<i>none</i>	1	—	—	—	—	1
<i>no more</i>	4	3	—	—	—	7
<i>never</i>	—	—	2	1	—	3
<i>nobody/no one</i>	2	2	2	—	—	6
<i>nowhere</i>	1	—	—	—	—	1
Total	114	32	4	1	7	158

for negative concord forms in general British English using data from all the spoken sections of the BNC, the COLT included; however, she finds that negative concord is more frequently used in southern Britain, and she identifies, in particular, a rate of 21.4 percent for the geographical area of London.

This study's findings on negative concord are laid out in Table 7. The negative elements listed in columns indicate the first elements of the respective negative concord structures; figures in rows show the corresponding second elements. The first cell in Table 7 can thus be interpreted as follows: the combination *-n 't/no/dunno* occurs with *nothing/nuffink* in forty-five cases, with *no* in sixty-one, with *none* in one, and so on.

In these data only five negators act as the first elements (*n 't/not/dunno*, *ain 't*, *never*, *hardly*, and *no*) in a clause containing a negative concord structure. This differs with the list of items occupying a second position in similar constructions, where seven different elements (*nothing/nuffink*, *no*, *none*, *no more*, *never*, *nobody/ no one*, and *nowhere*) are found. No cases are recorded, for example, in which *nobody*, *nothing*, or *nowhere* appear in first position followed by any other negator in the clause. This may be explained by the strong negative meaning associated with these

lexical items. Of the first set, that is, those occupying first position, *-nt/not* and *ain't* are used in 146 out of 158 cases,¹⁵ representing over 92 percent of the total. In the remaining negative concord structures, *no* occurs as the first element in about 5.5 percent of cases and *never* in the remainder, 2.5 percent. The case of *hardly* is marginal, with only one case identified; it has been included here as (29), despite not being a full negative item.

(29) Why don't she hardly never look after ... David any more?
(CO/B133705/19)

It can thus be claimed that *n't* and *no* together account for almost 98 percent of all first elements, while *hardly* and *never* play a rather marginal role as first elements of negative concord structures, which is in accordance with previous data. As second elements, *nothing* and *no* clearly prevail, occurring in this position in almost 89 percent of all cases, and they are followed by *nobody/no one* and *no more* with occurrences of approximately 4.4 percent and 3.7 percent, respectively. *Never* and *nowhere* are far less well represented in this respect, and no examples are registered in which *n't/not* or *ain't* function as the second element.

Broadly speaking, the findings here do not differ greatly about the distribution of negative elements in negative concord structures, from those obtained by Anderwald (2005) in her general study of negative concord in spoken British English. However, my findings plus the structure and configuration of the COLT corpus itself do not allow me to conclude that negative concord is a general sociolectal phenomenon and not a feature of typical regional variation, as Anderwald (2005:122) claims. The issue requires further study, where both social and regional factors can be fully addressed.

As regards the pragmatic function of these constructions, it could be hypothesized that by using negative concord the speakers tend to accentuate the negative effect of their message. This can be clearly seen in the two examples below. (30) forms part of a monologue in which the speaker is coming to the end of a joke she has been telling to a group of friends. In this case, *fucking* also serves to accentuate this intensifying negative meaning.

(30) The third man comes out like this . . . he goes what's a matter with you?
He goes you've got your cigarettes. <shouting>*I didn't get no fucking matches, did I?*</> That was my little joke that. . . . (CO/B132701/6)

In (31) the two speakers are looking at a picture and then a dispute starts. The second speaker denies what the first one said, and by repeating what his interlocutor has just said, he gives an intensifying force to his negative.

(31) A: Wow, look at that man, look at at that, please take a look at that.

B: That's a normal picture.

A: *Ain't no normal picture*, man. (CO/B134602/633)

In contrast with the previous examples in which negative concord clearly serves to accentuate a negative meaning, there are cases in which similar structures simply form part of the negative polarity system of the users and are equivalent to standard negative meanings. This can be seen in (32), in which the speaker simply reports that J. does not want any tea:

(32) A: I want a cup of tea as well.

B: You want a cup of tea?

A: Yeah.

B: I'll do it in a minute.

A: Mum, *Jxxx* says, *Jxxx don't get no tea now*. (CO/B135204/32)

Thus, it can be concluded that negative concord structures do not always have a strengthening effect simply because of the use of two forms in the same sentence and within the scope of the main verb. It is necessary to examine each case in detail to determine its communicative purpose. Contextual and prosodic information can help here.

If negative concord has been one of the most extensively discussed features of negation in nonstandard English, the negative adverb *never* has also received great attention in the dialect literature as regards some particular uses, functions, and meanings associated with them. As explained above, *never* has already been the focus of studies of British English dialects, most specifically in Cheshire, Edwards, and Whittle (1989) and Cheshire (1997, 1999). The main claim made by these sociolinguistic studies is that the process of standardization interrupted the negative cycle of language change, first pointed out by Jespersen (1917), and which has been repeated over the centuries, "consisting of using a universal temporal quantifier, meaning 'ever' or 'on one occasion' to reinforce a negative expression that has become weakened through frequent use" (Cheshire 1997:69). According to this theory, had this interruption not taken place, *never* could have ended up replacing *not*. Moreover, Cheshire (1997:75) also suggests that the use of *never* can often be a good strategy for promoting interpersonal communication in the spoken language.

In present-day English, *never* is most of the time used to express universal temporal negation, as in (33). However, it can also convey negation as referred to a particular point in time in the past, which is called here "punctual *never*," as in (34); this even includes cases when a specific temporal reference is included in the sentence (35):

(33) I've *never* heard anything so clearly in my whole entire life.
(CO/B132616/21)

(34) I *never* meant it like that. (CO/B137103/100)

(35) Vernon and <unclear> *never* called for me yesterday. (CO/B136903/164)

In the present data a total of 340 occurrences of *never* were found, although 16 of these were excluded because they were repetitions typical of speech; because they were impossible to analyze for technical reasons, 3 further cases were not considered. The total number of examples finally examined, then, was 321; *never* occurs with a frequency of 78 per 100,000 words. This finding is similar to that of Biber et al. (1999:797), who record an occurrence rate of 80 per 100,000 words in their British English conversation sample.

When considering the variation between *never* and *not...ever*, I found that speakers opted almost universally for *never*, with the pattern *not...ever* occurring only

Table 8. General Uses of *never* in the Bergen Corpus of London Teenage Language (COLT)

Temporal reference	N	%
Universal reference	217	67.6
Past reference (punctual <i>never</i>)	53	16.5
Future reference	9	2.8
<i>you never know</i>	7	2.2
<i>I never!</i>	7	2.2
<i>never mind</i>	20	6.2
<i>never ever</i>	8	2.5
Total	321	100.0

three times.¹⁶ This result is fully in keeping with previous studies (Cheshire 1982; Tottie 1991; Quirk et al. 1985) and seems to reinforce the assumption that *never* should be classified as a full negative word which does not show variation with *not*-negation items since the proportion of structures of this nature is so limited.¹⁷

Having dealt with the frequency of *never* and its variation with *not...ever*, I turn to its uses in the corpus. Table 8 captures the distribution of uses of *never* in the corpus. In over two-thirds of occurrences, *never* is used as a universal temporal negator. Punctual *never* makes up 16.5 percent of the total instances. There are only two examples in which the point in the past is explicitly mentioned, as in (35).

In almost 3 percent of cases, *never* is used with future reference; that is, the reference is not to all time but only to all possible cases in the future. This can be seen in (36) below:

(36) We went down by ourselves. Well, how we got down alive I'll never know.
(CO/B141202/146)

Occurrences of two semi-idiomatic expressions, *You never know* and *I never*, account for slightly over 4 percent of cases. The former conveys that something which apparently seems to be unlikely may in fact happen, while the latter can both express disbelief and negate something categorically, usually referring to something somebody claims the other person has done. Consider (37) and (38) below:

(37) A: Oh God, he's gonna win in he?
B: *You never know Mum*. The other geezer might have full hold of Peter....
(CO/B135603/98)

(38) A: Excuse me, did you just push me?
B: No I never did push you. (CO/B132701/56)

This last sentence is also an example of *never* being used to negate a single incident in the past and, again, is nonstandard. Finally, I also found a significant number of cases (6.2 percent) in which the expression *never mind* was used, and several instances of the combination of *never* with *ever* to emphasize or intensify an already negative meaning.

To sum up, I note that the two most striking features of *never* are (1) its relatively frequent use as a single negator in the past, a finding that is in accordance with nonstandard varieties of English and which is in keeping with previous research (Cheshire 1997), and (2) the lack of almost any variation between *never* and *not...ever* structures, which also confirms the results of previous studies as mentioned above. For both phenomena it will be interesting to explore the factors or variables that may favor those special uses. In the case of the former, it could well be the presence of quantifiers or even the speaker's involvement in the conversation, as Cheshire (1997) has already pointed out, or even other conversational features that need to be identified. In the case of the latter, expressive reasons may be at play, that is, *never* may be regarded by most speakers as a stronger marker of negation than the *not...ever* variant. To validate or refute these two hypotheses it will be necessary to see their evolution in the future in both standard and nonstandard varieties of English as well as in different registers and genres. Responses from a range of speakers surveyed on these issues through judgment tests and questionnaires could also help to clarify this.

Pragmatic Functions of Negative Structures in Youth Language

This section concentrates on the particular pragmatic uses of negation as expressed by teenagers. Taking as a starting point Tottie's pragmatic typology of negation and the results of previous studies (Givón 1978; Palacios Martínez 1995, 1996; Downing & Locke 2005), I found in the corpus, as expected, a large number of negative expressions that serve to deny something (an action, a particular form of behavior, a fact, a statement), either implicitly or explicitly. Apart from this, I also identified (albeit lower in number) a group of refusals or utterances in which one or several of the speakers openly show their unwillingness to accept, admit, or do something. This can be seen in the following conversation extracts, which can be classified as examples of implicit denial (39), explicit denial (40), and refusal (41), respectively.

(39) P: Miss! Miss! Miss!

D: Now listen, now listen. *This is not recording* is it?

P: Yeah

D: Now listen. (CO/B132403/79)

(40) P: J. erm, have you erm, erm there it is, Hello. Have you erm, done any, did you have music homework?

J: Yeah, *I didn't do it*, <unclear> (CO/B132404/12)

(41) S: It was so funny, I had this weird dream the other night, you know, [I mean].

J: [If it's about] Take That I *don't wanna hear*.¹⁸

S: Oh yeah. It was.

J: No, I *don't wanna hear* it. (CO/B132601/43)

In (39), P. and D. are engaged in a conversation about the recording of their tape.¹⁹ Although no explicit mention has been made of this, both are perfectly aware of what they are talking about, and this allows the latter to say that the tape recorder is not working, an example of an implicit denial. Example (40), however, is an example of an explicit denial because P. asks J. directly whether she has done her homework for the music class and the latter responds negatively. In (41) S. feels like talking about a dream she had the previous night but J. refuses to hear anything about it, a case of direct refusal.

Along with these discourse functions (implicit and explicit denials and refusals), I also identified (albeit to a lesser degree) negative sentences used to convey strong promises (42) and questions (43):

(42) C: [<shouting>Lucy how can] you [do that]</>?

J: [Shh.] Can you pinch exeat off other people?

L: [No but I, I did <unclear>]

C: [No you can't but she's trying to convince,] you *I will never trust you* again, [that's it,]

L: [Why?] (CO/B142602/484)

(43) N: [Oh], look at the Jungle Book! Oh I, I just [love that!]

J: [Really?]

N: Yeah. *Don't you think* it is really good? (CO/B132601/102)

None of the discourse functions described above differs greatly from mainstream English. As discussed before, a large number of negatives occur in the data, which is explicable in terms of the very structure of the corpus; the conversations included in COLT are mainly personal interactions between speakers with very few monologues; the corpus comprises mainly dialogues in which several adolescents are engaged in conversations that can be regarded as representative of daily life events. However, it is necessary to explore in more detail what makes the data here so different from mainstream adult English in terms of the pragmatics of the expression of negation.

One of the most notable features in the data is the high proportion of negatives as directives. About one-third of the total number of negatives recorded in the teenagers' dialogues and interactions correspond to imperatives, commands, orders, strong suggestions, directions, instructions, and refusals. They are an indication of the teenagers' directness and spontaneity in their expression:

(44) J: And *don't put your greasy little hands*, ha? <nv>laugh</nv>

S: Oh hi W.!

W: You alright Sxxx?

J: What are you doing here you cunt?

S: <laughing> *Don't call my boyfriend* a cunt </> (CO/B132601/5)

Positive politeness strategies seem to play an important role in teenagers' discourse since adolescents generally seek a positive relationship with their interlocutors to be accepted by the group they belong to or they would like to belong to (Brown & Levinson 1987). For teenagers it is extremely important to be accepted by their peers; their behavior and way of addressing the people around them are very often highly conditioned by it. The teenagers described here do not soften the force of their negatives to make them sound more polite or tentative but rather opt for straightforwardness and the use of negative statements without resorting to the kinds of adverbial attenuators typical of the language of adults, such as *actually*, *really*, *necessarily*. In fact, the corpus contains a relatively small proportion of all such expressions (*I don't really know*, *I can't actually think*, *I can't really say*, *I'm not entirely against the idea*, etc.) with which adult speakers avoid committing themselves to a particular idea or opinion. In (45) and (46) below we can appreciate the contrast between the adults' and the teenagers' ways of using the language in the expression of

negation. In both cases the speakers are talking about a particular person they know, so the topic of conversation is parallel. However, while in (45) the two adults make use of roundabout, indefinite, and vague expressions (*oh well, yes well, rather elusive, funny, strange*), including negative structures that may function as an excuse (*I don't really know her*), before committing themselves to a particular opinion and before saying what they actually think about the person they are talking about, in (46) the teenagers are much more direct, spontaneous, and categorical; they do not mind expressing their views straightforwardly, even contradicting each other. They start talking about the girl they know and they quickly switch to talking about the girl's legs as compared to their own legs. They do not even come to a full agreement on this simple question and they do not hide it. They are forthright and open.

(45) A: She's a strange girl.

B: I know who she is but she's been rather uh <,> elusive <,> as far as I'm concerned.

A: Yes.

B: oh yes <.> yes well <unclear>

A: She's a very funny girl

B: What's her name?

A: <unclear> uh it's Polly Mich <unclear>

B: uhm <,> oh yes I know the girl you mean <,> well. *I don't really know her.* (DC/DLB0404/92)

(46) A: You know that girl? What's that girl's name?

B: Who?

A: Erm, *I don't even know* what her name is. She's in the second year and she's Cxxx's cousin, the one with the afro.

A: Oh, is that her cousin?

B: Yeah, I think so. Do, do my legs look like hers?

A: Your what?

B: My legs.

A: *I wasn't looking at her legs*, I <unclear> legs.

B: Oh god! Well I noticed.

A: Noticed what?

B: Erm that girl's l= [legs.]

A: [Who] noticed?

B: The, curly [haired one.]

A: [You noticed] what they look like?

B: N=, *no* my legs are quite whole.

A: Who said that?

B: *No one.* (CO/B140704/21)

In addition to these distinctive pragmatic features of teenagers' negative speech, two others are worthy of note. The first is the tendency to accumulate several negatives in a short stretch of language. This is generally done to intensify the message, and at times this is even reinforced by cases of negative concord structures. The second feature is explained in terms of teenagers' fondness for playing and experimenting with language, seeing at times how certain expressions and words

sound, a phenomenon that has been reported extensively in the literature, not only in the case of the first language (Bakhtin 1981) but also in the learning of a second language (Cook 1997; Tarone 2003). In the corpus, I found several episodes in which one of the speakers tries to mimic a specific accent (generally American, Norwegian, German, African, West Indian, Pakistani, Cockney, or a “posh” variety, such as Received Pronunciation (RP) or even imitates the way of speaking of a particular person, usually a teacher or a peer, just to sound funny and to make others laugh, or perhaps to tease one of his or her peers. By the same token, it is common to find extracts in which one speaker begins to make a statement and a second speaker contradicts what has just been said; the conversation is then constructed by a succession of exchanges in which one of the speakers says something and the other states the opposite immediately afterward. It could be regarded as a kind of ritualized play. Negation thus becomes a means of playing with language while at the same time enabling teenagers to consolidate their personality and give more force to what they are saying. Observe the following conversation extract:

- (47) S: had his hands on the bloody thing he, I just got his a= I just jump up.
 [Cos I]
 J: [You but] S *you don't* <laughing> *you don't* </> ... <laugh>
 S: [*No I never!*]
 J: Yes you did Sxxx!
 S: <laughing> *I never* </>
 J: He saw your body.
 S: *I never*.
 J: and ever [since then, face it Sxxx!]
 S: I *ne*=, *no* shut your mouth! Shut up! <shouting> *I'm not*.
 J: That's <unclear> Sxxx</>
 S: He's a dirty, rotten bastard!
 J: Sxxx
 S: *No!*
 J: you enjoyed it.
 S: *No*.
 J: Face it!
 S: *No!*
 J: You enjoyed it.
 S: *I never!* (CO/B132603/323)

It is not possible to understand the discourse function of teenagers' language in their expression of negation unless a correlation is drawn between their use of language and their psychological and cognitive condition (Romaine 1984; Eckert 1988; Andersen 2001; Stenström, Andersen, & Hasund 2002). Psychological factors typical of this period in the development of a person (spontaneous behavior, search for identity, rapid cognitive development, strong desire to enjoy life and have fun) can help to explain a high involvement style and frequent use of negative directives, the tendency to accumulate negatives in short stretches of language to intensify the message, the scarcity of hedging of negatives (since adolescents tend to be direct and straightforward), and the tendency to turn the use of negatives into a verbal game with peers.

Conclusions

This article has analyzed some syntactic, lexical, and discourse features of negatives in the speech of London teenagers, focusing particularly on the description of those features of the negative structures that are typical of teenage language, especially as compared to the equivalent structures in typical adult language.

The study was based on data from the COLT corpus. A total of 14,305 negatives were closely examined with the help of the application Concapp4; on many occasions, however, the units considered had to be manually analyzed since contextual information was needed for a sound interpretation of the data. In terms of syntax, a high frequency of negatives on the teenagers' part was observed, certainly higher than in spoken adult mainstream English. This was explained partly by the structure of the corpus itself, but also in terms of cognitive and psychological features typical of teenagers. In their conversation, adolescents tend to make their points clearly and directly as a strategy for self-reinforcement. Furthermore, the data in both corpora confirm that spoken interaction is especially propitious for the expression of negation.

As far as negative types are concerned, affixal negation was observed to be little used in teenagers' conversations since their speech is characterized by its informality and colloquial nature and affixal negation tends to be more closely associated with more formal registers. Also noted was the adolescents' strong tendency to intensify language. Negative intensification is achieved through the use of three main mechanisms: certain expressions of negative import, no way being the most common (especially as compared with the language of adults); negative concord structures; and some negative polarity idioms (*I don't give a fuck, I don't give a shit, I couldn't give a toss*). In addition to this, it is quite common to find certain swear words, such as *bloody* and *fucking*, inserted in the middle of the negatives for heightened effect.

The abundance of negative concord constructions is also noteworthy: in 23 percent of structures where it was possible to find variation between clauses with a clause negative form, such as *not* together with a negative quantifier within the scope of the negative, and negative concord structures, the latter occurred compared to 14 percent in adult speech. It is quite possible that geographical factors, social class, and style may in fact play a more important role here than the age of the speakers. Finally, the high frequency of *never* as a single negator in the past and the nonexistent variation between *never* and *not...ever* structures in the data were both notable findings.

As regards lexis, there was a high occurrence of innovative forms with a negative prefix (e.g., *uncool, unscrewable*), as well as the use of a high number of negative polarity idioms. From a pragmatic point of view, teenagers stand out for being extremely spontaneous, direct, and frank in their expression; this, it was argued, explains the high number of negatives as directives. In connection with this, a low number of hedgings of negative statements, typical of adult language, were also observed. Adolescents play a wide variety of language games. They might repeat words or sentences just for the sake of it, or to hear how they sound; they imitate sounds, a particular accent, or the way somebody speaks, either to make fun of him or

her or, again, simply for the sake of it; they might also resort to negation to contradict systematically what the other speaker has just said. The conversation thus can become more of a game one has to play.

Some of the tendencies discussed above reflect the cognitive development of teenagers as applied to language production as well as the role played by certain sociological variables, such as geographical background, ethnicity, social class, type of education, and gender. Hence, the expression of negation in the language of teenagers has to be understood in the framework or interplay of cognitive and sociological variables. Psychological factors can explain the high involvement of teenagers' speech, their directness, their frequent use of negatives as directives, and their keenness to play with language. In contrast, sociological variables may account for the high proportion of negative concord structures, the frequent use of *never* as a single negator in the past, and the occurrence of idiosyncratic negative forms such as *nope*, *nah*, *dunno*, *nuffink*, and *innit* as an invariant question tag and the form *ain't*. At times it is difficult to distinguish the effects of these two sets of variables (cognitive and sociological) since they may operate jointly.

This preliminary analysis has attempted to illustrate the innovative nature of teenagers' language in the expression of negation and how negative polarity is of particular interest in this variety. There are, however, a number of issues that are in need of further attention: the specific role played by some of the sociological variables (geographical factors, gender, education, and social class), a full study of some of the negative forms and types identified (*innit*, *ain't*, *nope*), and the pragmatics of negative concord structures [].

Appendix C. 8

Learning styles

Sarvenaz Hatami

A learning style is not in itself an ability but rather a preferred way of using one's abilities (Sternberg 1994). Individuals have different learning styles, that is, they differ in their 'natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills' (Reid 1995: viii). Learning styles are typically bipolar entities (for example reflective versus impulsive, random versus sequential), representing two extremes of a wide continuum; however, where a learner falls on the continuum is value neutral because each extreme has its own potential advantages and disadvantages (Dörnyei 2005). Moreover, although individuals may have some strong style preferences and tendencies, learning styles are not fixed modes of behaviour, and, based on different situations and tasks, styles can be extended and modified (Reid 1987; Oxford 2011). However, the extent to which individuals can extend or shift their styles to suit a particular situation varies (Ehrman 1996).

In general psychology, interest in learning styles goes back to at least the 1920s when Carl Jung proposed the theory of psychological types (Sternberg and Grigorenko 1997). In the field of education, the learning style concept has been recognized since at least the mid-1970s (Griffiths 2012). Subsequently, many different dimensions of learning styles have been investigated both conceptually and empirically, and numerous theories and multiple taxonomies attempting to describe how people think and learn have been proposed, often classifying individuals into distinct groups (for example visual versus auditory, global versus analytic, inductive versus deductive). Furthermore, various learning style instruments (for example written surveys) have been developed for both research and pedagogical purposes (for a critical review of some of the most influential models and instruments, see Coffield, Moseley, Hall, and Ecclestone (2004)).

According to Sternberg and Grigorenko (op.cit.: 702), there are three main motivations for the interest in the study of styles: 'providing a link between cognition and personality; understanding, predicting, and improving educational achievement; and improving vocational selection, guidance, and possibly, placement'.

While there is ample evidence that individuals differ in how they prefer to take in, process, and acquire new information, the educational implications of such preferences have been a source of great controversy among researchers and educators over the years (Pashler, McDaniel, Rohrer, and Bjork 2009). Proponents of learning styles assessment in instruction believe that learning styles can be measured and used as a valuable teaching tool inside the classroom (for example Sternberg, Grigorenko, and Zhang 2008). According to these scholars, by diagnosing students' learning styles and matching them to teaching methods (for example for a 'visual learner', presenting information through pictorial illustrations), learning can be greatly enhanced. Other scholars have rejected the value of learning styles in educational practice and claim that tailoring instruction to students' individual learning styles does not lead to better learning outcomes (for example Stahl 1999; Willingham 2005).

This same controversial situation exists in the area of second language acquisition (SLA). A number of research studies in SLA have addressed the relationship between learning styles and second language (L2) achievement; however, these studies have generally found only a weak relationship (Ellis 2008). Thus, based on what research in SLA has revealed so far, the question of whether or not learning styles are strongly associated with L2 acquisition and should therefore be considered in L2 teaching cannot be answered with certainty. As Ellis (*ibid.*: 671) states, ‘at the moment there are few general conclusions that can be drawn from the research on learning style’. According to Riding (2000: 365), this vague situation is due to a number of serious problems, in particular ‘there being too many labels purporting to being different styles, the use of ineffective assessment methods, and the lack of a clear distinction between style and other constructs such as intelligence and personality’.

Further research with more appropriate methodologies is needed to validate the use of learning styles assessment in instruction (Pashler *et al. op.cit.*). Until this occurs, however, as Chapelle (1992: 381) states, we simply cannot disregard the concept of learning style, ‘which express[es] some of our intuitions about students and which facilitate[s] appreciation for the divergent approaches to thinking and learning’ [].

Appendix C. 9

Reading Faster

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ABSTRACT

This article describes the visual nature of the reading process as it relates to reading speed. It points out that there is a physical limit on normal reading speed and beyond this limit the reading process will be different from normal reading where almost every word is attended to. The article describes a range of activities for developing reading fluency, and suggests how the development of fluency can become part of a reading programme.

KEYWORDS: reading speed; reading processes; reading fluency; activities.

I. INTRODUCTION

I.1. "Are you ready? Go!"

At this command, eighteen heads dip down and the learners begin reading in earnest. At the same time the teacher is pointing to minutes and seconds written on the board, indicating how much time has passed since the learners began reading.

Minutes	Seconds
0	00
1	10
2	20
3	30
4	40
5	50

As each learner finishes reading the short text, they look up at the board, note down the time it took them to read, and then turn over the text and start answering the ten comprehension questions on the back of the sheet. When they have answered the questions, they get their answer key and mark their own answers. They look at the conversion chart and convert their time into words per minute. They enter their speed in words per minute onto the speed graph and they enter their comprehension score out of ten onto the comprehension graph. The teacher moves around the class looking at graphs and giving comments and encouragement to the learners. The whole activity has taken about seven minutes. The same activity will happen two or three times more in the same week and will continue for a total of around seven weeks until most of the twenty-five texts have been read. This is one lesson in a speed reading course for non-native speakers of English. This article looks at the reasons for having such a course. It then examines a range of ways in which reading speed can be increased and maintained.

I.2. The nature and limits of reading speed

To see what reading speed goals it is sensible to aim for, we need to understand the physical nature of reading and how this relates to reading speed. There are many misconceptions about reading faster, particularly about how fast people can read, and these can be cleared up by looking at the physical nature of reading. When people read, three types of action are involved - fixations on particular words, jumps (saccades) to the next item to focus on, and regressions (movements back to an item already looked at). This means that while reading the eyes do not move smoothly along a line of print, but jump from one word to another. There has been a great deal of research on eye movements while reading and recent improvements in eye tracking technology have confirmed the following findings (Rayner, 1998):

1. A skilled reader reading at around 250-300 words per minute makes around 90 fixations per 100 words. Most words are fixated on, but function words like *the* and *of* are fixated on much less often than content words. The longer the word, the more likely it is to receive a fixation. If a word is really long, it may receive 2 or even 3 fixations. Around 200 milliseconds are spent on each fixation (about 5 per second). The length of these fixations vary a lot depending on how difficult a word or sentence is to read.

2. Each saccadic jump is around 1.2 words in English. This is about eight letters. In Finnish, where words are longer, the average jump is 10 letters. This is around the maximum number of letters that can be seen clearly in one fixation. During the jump no items can be focused on because the eyes are moving. A jump takes about 20 milliseconds. The basic unit in the jump is the word and languages with quite different writing systems (for example English and Chinese) all tend to have an average of one jump for every 1.2 words.

3. A skilled reader makes around 15 regressions in every 100 fixations. Regressions occur because the reader made too big a jump (many regressions when reading in English are only a few letters long), and because there were problems in understanding the text.

What this research shows is in normal skilled reading most words are focused on. Because there are limits on the minimum time needed to focus on a word and on the size and speed of a jump, it is possible to calculate the physiological limit on reading speed where reading involves fixating on most of the words in the text. This is around 300 words per minute (5 fixations per second times 1.2 = 6 words per second times 60 = 360 words per minute). If regressions are considered, this reduces the forward movement through the text to around 300 wpm). If someone is reading at a speed of 400 words per minute or more, then that person is no longer fixating on most of the words in the text. In Urquhart and Weir's (1998) terms, that person is no longer doing careful reading, but instead is doing "expeditious reading", which includes skimming and scanning. Unless such readers bring a great deal of background knowledge to their reading, they will usually be unable to answer detailed questions on parts of the text not fixated on.

Many non-native speakers of English and some native speakers read at speeds which are well below 300 wpm. About one-quarter of the time in a well-balanced language course should be spent on helping learners become more fluent in using the

language they already know, that is, making the best use of what they have already learned. This fluency development needs to cover the four skills of listening, speaking, reading and writing and needs to involve substantial amounts of input and output.

The physical symptoms of slow reading are (1) fixating on units smaller than a word (word parts, letters, parts of letters) and thus making several fixations per word, (2) spending a long time on each fixation or on some fixations, and (3) making many regressions to look back at what has already been read. Increasing speed will result in a change in these symptoms.

Reading speed is affected by a range of factors including the purpose of the reading, and the difficulty of the text. The difficulty of the text is affected by the vocabulary, grammatical constructions, discourse, and background knowledge. A reasonable goal for second language learners who are reading material that contains no unknown vocabulary or grammar and that has easy content is around 250 words per minute. Let us now look at how learners can be helped reach this reading speed.

I.3. The nature of fluency development

We have looked briefly at the physical aspects of reading and how these change as fluency develops. But these signs are the result of mental processes. One of the mental processes involved in reading is decoding, that is, turning the written form of a word into a familiar spoken form with a known meaning. Readers develop skill in decoding in two related ways. Through practice they become faster at recognising the unit they are working with, and secondly they change the size of this basic unit. When someone begins to read an unfamiliar written script there are many things to notice. Say for example a Thai speaker is learning to read English. Because Thai uses a different script from English, learning to read the English letters *p b d g* is quite difficult because although the letters have some similarities, there are important differences. Where is the circle part of the letter, at the top or at the bottom, on the left of the stalk or on the right? *p b d* have straight stalks, *g* has a bent stalk. At a very early stage of reading English, each part of a letter is an important piece of information. With practice, fluency in recognising the different letters develops and soon the basic unit that the reader is working with is no longer the parts of the letters but the letters themselves. With further reading experience the basic unit will change from letters to word parts and words. At early stages of word recognition, learners may rely on only some of the letters, usually the initial letters, for word recognition. As they become more accomplished readers, they may no longer need to notice each letter but can recognise whole words and if necessary apply rules or use analogy to quickly decode unfamiliar words. What this means is that fluency development involves not just becoming faster, it also involves changing the size and nature of the basic unit that the reader is working with. Another way of putting this is to say that fluency develops when complex activities like reading are made less complex by the fluent mastery of some of the subskills involved in the activity.

Research on speaking fluency (Nation, 1989) provides evidence for this. The 4/3/2 speaking activity involves learners working in pairs and one member of the pair speaking on a familiar topic to the other (the listener) for four minutes. Then they change partners. The speaker remains as a speaker and the listener stays as a listener.

The speaker now has to give the same talk to the new partner in three minutes. The partners change again and the same talk is given for two minutes. When the two minute and four minute talks are compared, it is typically found that (1) the speed of speaking has increased in terms of words per minute, (2) the number of hesitations has decreased per 100 words, (3) the number of grammatical errors in repeated sections of the talk has decreased, and (4) there are two or three more complex sentences in the two minute talk compared with the four minute talk. For example if in the four minute talk the speaker said “We went to Paraparaumu. Paraparaumu is outside Wellington”, in the two minute talk they may say “We went to Paraparaumu which is outside Wellington”. Two simple sentences become one complex sentence. Fluency is thus accompanied by improvements in accuracy and complexity (Schmidt, 1992). This is because as parts of the task become more under the control of the speaker, other parts of the task can get better attention.

There are two main paths to fluency. One could be called “the well-beaten path” and the 4/3/2 activity is an example of this. In such activities, repetition of the same material is used to develop fluency. By doing something over and over again you get better at doing it. The second path to fluency could be called *Athe rich and varied map@*. In such activities, the learners do things which differ slightly from each other but which draw on the same kind of knowledge. A good example of this is easy extensive reading where learners read lots of graded readers at the same level. The stories differ but the same vocabulary and grammatical constructions reoccur and the learners develop a rich range of associations with the words and constructions.

I.4.The nature of fluency development activities

If an activity is going to contribute effectively to fluency development then it needs to meet certain conditions. Let us look at a very useful fluency development activity for reading aloud to see what these conditions are.

Repeated reading has been used with good results with first language readers to help reach a good degree of oral reading fluency (Samuels 1979, Dowhower 1989, Rasinski 1990, Sindelar, Monda and O’Shea, 1990). The learner reads a text (about 50-300 words long) aloud with help where necessary, while the teacher or another learner listens. Then the text is re-read reasonably soon after (within a day). Then the text is read again a day later. The text should only be a little bit above the learner’s present level. Most of the running words should be easily recognised. The optimal number of repetitions is around 3 to 5. Using texts intended to be read aloud, like poems, plays, jokes or stories can increase the purposefulness of the activity. Repeated reading and repeated reading while listening to a taped passage give similar positive results.

Let us now look at a range of reading activities that meet these conditions and that are thus very useful for developing reading fluency. The activities are divided into three groups which are in order of development. The first group of reading fluency activities involve reading aloud. Such reading is a very important first step towards the second group of activities which involve careful silent reading. The third group involve “expeditious reading”, or skimming and scanning very quickly to get a particular piece or a particular type of information. Skill in careful silent reading is an important prerequisite to most skimming and scanning.

II. INCREASING ORAL READING SPEED

Reading aloud has not been looked on very favourably in the second language reading class mainly because of the misuse of the technique of reading aloud around the class. However, in the first language classroom reading aloud to the teacher or to a peer is a very important step towards gaining fluent decoding and comprehending skills which are a necessary preparation for fluent silent reading. There are several useful activities for working on oral reading and they have just as much value in the second language class as in the first. What all these activities have in common is a learner reading aloud, trying to convey the message of the text to a sympathetic and interested listener. In small classes this may involve a learner reading to the teacher, but in most classes it will involve pair work where a learner reads to a classmate.

II.1. Repeated reading

We have already looked at repeated reading. A strength of this technique is that it can be used with material that has some difficulties for the reader. By repetition these difficulties are overcome and in the later repetitions the activity can thus meet the conditions needed for fluency development.

II.2. Paired reading

Paired reading is a form of assisted reading. In this activity, the learner is paired with a more proficient reader. They sit side by side and read the same text aloud together with the more proficient reader keeping at the same speed as the less proficient reader. The less proficient reader nudges the more proficient reader as a signal that she wants to read alone. If the less proficient reader strikes problems, the more proficient reader joins in reading again. Word recognition errors are corrected as soon as they happen, simply by the proficient reader saying the word without further explanation. The same activity can be used with a parent or a cross-age peer. A paired reading activity can last for about fifteen to thirty minutes, and the learners should be trained in the use of the procedure. Research on this activity shows that learners make very substantial progress in accuracy and comprehension. The tutors also make progress in their reading (Rasinski and Hoffman 2003, Topping 1989).

II.3. 4/3/2 reading

This is an adaptation of the 4/3/2 speaking activity (Nation 1989) for reading aloud. Each learner has a text to read. All the learners could have the same text but it is more interesting for the listeners and more suitable for a class with a wide range of proficiency if they all have different texts. The learners form pairs. One member of each pair is the listener and the other is the reader. When the teacher says AGo!@ each reader reads their text to their listener. After four minutes the teacher says AStop!@ and the readers stop reading. They change partners and the readers then read the same text for three minutes to their new listener. They change partners again and the readers now read the same text to the new listener for two minutes. The learners are told that they should try to speed up each reading so that each listener hears about the same amount of text even though the time is less. As a variation, after each reading the reader can mark in pencil the place in the text they reached.

II.4. Extensive reading aloud

A part of the class time can be set aside for learners to read to each other or for one learner to read a continuing story to a small group. The story should be easy to read and the reader can concentrate on making it interesting. A variation could be learners making a tape-recording of a story for others to listen to.

II.5. Read-and look-up

This activity does not meet many of the conditions for a fluency activity but it is one that encourages learners to work with a larger basic unit. Michael West (1960: 12-13) devised this technique as a way of helping learners to learn from written dialogues and to help them put expression into the dialogues. West regarded the physical aspects of Read-and-look-up as being very important for using the technique properly. The learners work in pairs facing each other. One is the reader, the other is the listener. The reader holds the piece of paper or the book containing the dialogue at about chest level and slightly to the left. This enables the reader to look at the piece of paper and then to look at the listener, moving only her eyes and not having to move her head at all. The reader looks at the piece of paper and tries to remember as long a phrase as possible. The reader can look at the paper for as long as is necessary. Then, when ready, she looks at the listener and says the phrase. While she looks at the paper, she does not speak. While she speaks she does not look at the paper. These rules force the reader to rely on memory. At first the technique is a little difficult to use because the reader has to discover what length of phrase is most comfortable and has to master the rules of the technique. It can also be practised at home in front of a mirror. West saw value in the technique because the learner “has to carry the words of a whole phrase, or perhaps a whole sentence, in his mind. The connection is not from book to mouth, but from book to brain, and then from brain to mouth. That interval of memory constitutes half the learning process.... Of all methods of learning a language, Read-and-Look-up is, in our opinion, the most valuable” (West, 1960: 12).

Good spoken reading speeds range from 100 to 200 words per minute. These are necessarily slower speeds than silent reading speeds.

Reading aloud is a useful activity to practice accurate decoding and it is a useful activity in its own right - people gain pleasure from listening to stories and talks and from reading stories to others. The activities in this section provide a useful preparation for the silent reading activities described in the next section.

III. INCREASING CAREFUL SILENT READING SPEED

The classic way of increasing reading speed is to follow a speed reading course consisting of timed readings followed by comprehension measures. For learners of English as a second or foreign language, such courses need to be within a controlled vocabulary so that the learners are not held up by unknown words. The first published course for foreign learners of English was *Reading Faster* by Edward Fry (1967) which had an accompanying teachers' book called *Teaching Faster Reading* (Fry, 1965). The course consisted of texts around 500 words long, each followed by ten multiple-choice questions. The texts were taken from a graded reader and were written at the 2000 word level. The course worked well but it was not suitable for learners with vocabularies of less than 2000 words and it also contained the names of diseases

like *kwashiorkor* and *yaws* which tended to slow the reading. Quinn and Nation (1974) developed a course written well within the first 1000 words of English consisting of 25 texts each exactly 550 words long and followed by ten comprehension questions. Other speed reading courses have not used a controlled vocabulary and this has meant that they do not meet the conditions needed for fluency development.

There have been mechanical reading pacers where the text is revealed at a pre-set speed and there have been films which reveal text at a certain rate. Such aids are fun but are not necessary for increasing reading speed. The essential requirements are suitable texts and questions.

III.1. Easy extensive reading

Another very effective way of increasing reading speed is to get learners to read graded readers at a level which is much easier than the level they would normally read to gain meaning-focused input. Learners should be encouraged to do large quantities of such reading and to re-read books that they really enjoyed. It is important to remember that there needs to be two types of extensive reading involving graded readers. One type, reading for meaning-focused input, involves learners reading at a level where about one word in 50 is unknown. These words can be guessed from context and add to the readers' vocabulary knowledge. The second type of extensive reading, reading for fluency development, should involve texts where there are virtually no unknown words. Such texts should be read quickly for enjoyment, and large numbers of them should be read.

III.2. Silent repeated reading

In this activity the learners silently re-read texts that they have read before. In order to encourage faster reading they can note the time each reading took so that they have the goal of reading it faster each time.

III.2.1. Issue logs

At the beginning of a language course the learners each decide on a topic that they will research each week. Each learner should have a different topic. The topics can include pollution, global warming, oil, traffic accidents, the stock market etc. Each week the learners find newspaper reports, magazine articles, academic texts, information from the internet, television reports etc on their topic and write a brief summary. Because they are reading lots of material on the same topic they will soon be in control of the relevant vocabulary and will bring a lot of background knowledge to what they read (Watson, 2004).

Careful silent reading is the most common kind of reading. Learners need to be able to read with good comprehension near the upper speed limits of such reading.

IV. INCREASING SILENT EXPEDITIOUS READING SPEED

There are two major kinds of expeditious reading - skimming and scanning. The major goal of speeded expeditious reading would be to increase skimming speed. In skimming the reader goes through a text quickly, not noting every word but trying to get the main idea of what the text is about. This is sometimes called getting the gist of the text. After such reading the reader is unlikely to have noticed details, but should be

able to say in a general way what the text is about. The more background knowledge that a reader brings to skimming, the faster the skimming speed is likely to be. Reading speeds higher than 300-400 words per minute are the result of skimming, not careful reading.

IV.1. Skimming

Being able to skim text is a useful skill, because skimming can be used to help decide if a text or section of a text deserves careful reading. Skimming activities should involve texts which are at least 2000 words long and which are on topics that the learners are familiar with. Comprehension should be measured by questions which ask “What was the text about?”. Multiple-choice or true/false questions which focus on the gist of the text could also be used.

IV.2. Scanning

Scanning involves searching for a particular piece of information in a text, such as looking for a particular name or a particular number. It is probably better to spend time increasing skimming speed than to devise scanning activities. This is because effective scanning depends on good careful reading and skimming skills, and training in scanning is unlikely to result in more fluent access to items.

Typical scanning tasks include searching a text for a particular quotation, someone’s name, a particular date or number, or a particular word; or searching a list for a telephone number, someone’s name, or a particular word or phrase.

V. FREQUENTLY ASKED QUESTIONS ABOUT READING SPEED

V.1. What about comprehension?

Comprehension is very important when developing fluency in reading. There is no point in reading faster if little is understood. For careful silent reading, readers should score seven or eight out of ten on a comprehension test. Higher scores than this indicate that the reader is going too slow and is trying to get too much from the text. It would be easy for the reader to increase their speed. Scores of six or less out of ten are too low and the reader should read subsequent texts at the same speed until comprehension improves. Speed reading courses use both words per minute graphs and comprehension score graphs. Lower comprehension scores are acceptable for skimming tasks because while skimming readers do not give attention to every part of the text. Questions on skimming texts should look for the main ideas.

V.2. How can reading fluency be measured?

The typical measure for all kinds of fluency tasks is words per minute (see Lennon 1990 for a wide range of measures for speaking fluency). There has been some debate over whether syllables per minute is a more precise measure, but the difficulty in counting syllables is much greater than any small returns in accuracy it may bring. Moreover, research into eye movements suggests that words not syllables are the primary unit of attention.

V.3. How can progress in reading fluency be monitored?

V.3.1. One minute reading

An interesting activity for regularly checking on reading speed is One minute reading (Iwano, 2004). The learners read a text with the time being recorded by a stopwatch. After exactly one minute the teacher says “Stop!”, and the learners mark where they reached in the text. They then count how many words there are up to that point. Doing this on the same text before and after a speed reading program can be a good way of showing learners how their speed has increased.

V.3.2. Reading logs

A log is a regular record of what happened at particular times. Learners can keep a log of their extensive reading, noting the name of the book, the time they started reading and how much they read. If this is accurately done, it may provide a rough indicator of reading speed and increases in speed.

V.3.3. Speed reading graphs

When learners do a speed reading course with short texts and questions, they score their speed and comprehension on graphs (see Quinn and Nation 1974, page 51). Teachers should regularly look at learners' graphs and give them advice and encouragement. Where progress is not being made, the teacher can suggest remedial procedures like repeated reading, skimming before reading, and discussion of the content with a friend before reading.

V.4. What are good reading speeds?

A good oral reading speed is around 150 words per minute. A good careful silent reading speed is around 250 words per minute. A good skimming speed is around 500 words per minute. These are reasonable goals for foreign and second language learners who are reading material that contains no unknown vocabulary and grammar.

V.5. What are the advantages and disadvantages of reading faster?

There are disadvantages of reading faster. The pressure to go faster can be a source of stress. Such pressure can reduce the enjoyment that learners get from reading. It is best to see the skill of reading faster as providing a wider range of choices for a reader. Sometimes it is good to read fast. At other times it is not. Being able to make the choice is an advantage.

Research on reading faster has shown that increasing reading speed in one language can result in increases in another known language. This has been tested from the first language to English (Bismoko and Nation 1974) and from English to the first language (Cramer, 1975; West, 1941). It is likely that the transfer of training here is the transfer of confidence, that is, the confidence that you can read faster and still comprehend.

VI. CONCLUSION

It has been suggested that reading too slowly at speeds of much less than 100 words per minute can have negative effects on comprehension. Anyone who has learned to read another script knows the phenomenon of slowly sounding out the script and then having to go back and read the sentence again more fluently to see what it means [].

Appendix D

Fragments of articles used in pre-test tasks

Task 1.

"We Are All in the Same Boat Now"

Proverbial Rhetoric in the Churchill-Roosevelt Correspondence

Wolfgang Mieder

Turning from their valiant deeds as politicians to their rhetorical ability, both Churchill and Roosevelt have uttered concise statements that have become part of the sententious if not proverbial repertoire of the Anglo-American language. Especially regarding Churchill, much has been made of his capacity as a "phrase forger" and his interest in employing the English language as an effective rhetorical weapon. In fact, his predisposition to proverbial rhetoric has been studied in considerable detail. Roosevelt's careful attention to his oratorical skills at public speeches, press conferences, and especially during his famous "fireside chats" has also been scrutinized, but his quite similar inclination towards the use of proverbs and proverbial expressions has hitherto gone completely unnoticed. There is merely a very short study that refers to Churchill's and Roosevelt's "use of clichés" (Miller & Villarreal, 1945), but there are no textual examples (!) and proverbial matters are not even mentioned.

Proverbial expressions and proverbs were most certainly part of this common linguistic ground, and this proverbial language also carried over into their secretive war correspondence. While many letters contain factual paragraphs relating to pragmatic matters of conducting the war, there is always room for personal comments to underscore emotional states, ranging from frustrations and disappointments to expressions of thankfulness and friendship. And the two friends are an even match proverbially, with Churchill using 238 proverbial statements in his 1161 letters, messages, and telegrams (i.e., one phrase per 4.88 letters), and Roosevelt employing 206 such phrases in his 788 epistolary texts (i.e., one phrase per 4.86 letters).

The fact that both men had been in their respective navies helped to bond them as comrades in their struggles, and they quite obviously delighted in using nautical phrases in their letters as time went on.

Both former naval administrators had no problems whatsoever understanding each other's use of maritime expressions. A number of scholars have commented on their predilection towards military metaphors in general and nautical images in particular. But in the case of studies on Roosevelt, it is as if their authors have never heard of proverbs or proverbial expressions. These genre designations are nowhere to be found, and with very rare exceptions only metaphors are cited as examples without even mentioning the rich proverbial language of both naval persons.

Among important events was Roosevelt's fourth campaign for the presidency, and it was Churchill who paid his friend in arms a touching compliment after his reelection, drawing very appropriately on the maritime phrase of "to weather the storm" to tell Roosevelt how glad he is that he will continue to be the "pilot" of the American ship of state.

Somatic expressions are prevalent in the discourse of both Churchill and Roosevelt, with the latter being particularly conscious of body metaphors due to his own physical disability. They use proverbial expressions to add emotional intensity to their messages, clearly showing that this colloquial language enables them to let their feelings show during extremely stressful times. It must, of course, be said that Roosevelt and Churchill were fortunate in that they were both native English speakers. These metaphors certainly created ample problems for translators, especially during the meetings with Stalin.

Charles de Gaulle proved to be a constant headache for both Roosevelt and Churchill, especially as he sought to solidify Gaullist control in Africa by pressing for the replacement of Pierre Boisson as Governor General of West Africa. When General Henri Giraud left de Gaulle behind in Algiers on a trip to Washington, Churchill rightfully wrote a deeply concerned telegram to the President:

I am somewhat concerned at Giraud leaving Algiers at this juncture on a visit to you. If both [Giraud and de Gaulle] were invited it would be all right, but I think it dangerous to leave the field open to De Gaulle, especially while the position of Boisson is so uncertain. While the mouse is away the cat will play two groups undecipherable.

There is one final play with the proverbial comparison “to look like a (the) cat ate (swallowed) a (the) canary” of 19th-century American origin with the meaning of being well-satisfied with oneself. To understand this metaphorical game played by the President and Prime Minister, it must be kept in mind that “cat” for them meant the press, while the “canary” stood for a German submarine. Roosevelt began the verbal game with his letter of July 15, 1943, in which he opposed making a special announcement of recent sinkings of German U-boats, lest Americans would get the unfortunate impression that victory was in sight:

The wave of optimism that has followed recent successes and our latest release on the anti-submarine situation is definitely slowing down production. We cannot afford to further inflate this costly public disregard of the realities of the situation, and therefore I doubt the wisdom at this time of giving the cat another canary to swallow.

The linguistically adept Churchill caught on quickly to the metaphor, responding the next day with a two-line telegram that must have tickled Roosevelt: “My cat likes canaries and her appetite grows with eating. However, news is now outdated as we have altogether 18 canaries this month” [].

Task 2.

Occasional Adnominal Idiom Modification - A Cognitive Linguistic Approach

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Functioning as the referring elements in sentences, nominals (or NPs) are syntactically saturated when they contain a noun whose referential status has been specified by a determiner. Thus, the dog in (1) is a fully grammatical NP.

(1) I love the dog.

Starting from this minimum degree of specification, the structural complexity of NPs can be further extended by adding adnominal premodifiers and postmodifiers. These constituents contribute additional information to the head (dog) as in (2):

(2) I love the nice brown dog that my aunt brought me from Spain.

Adnominal modification is virtually unlimited. This, however, is not true for idiomatic constructions. Consider the ill-formed instance of the idiom *spill the beans* (reveal the truth about sth.) in (3):

(3) I spilled the nice brown beans that my aunt brought me from Spain.

In phraseological research, the restricted lexico-grammatical malleability of idiomatic constructions has long been recognised as an empirical fact. The restricted syntagmatic variability of idioms as illustrated in (3) is defined as fixedness. In contrast, variability captures the degree to which idioms remain open to occasional departures from their lexicalised base-forms. Thus rather than being fully fixed, many idioms may be open to limited elaboration through adnominal modification as exemplified in the following uses of *spill the beans*:

(4) One of their number has just written a book questioning this kind of control and spilling the beans of angst rather as American and British feminist writers did in the Seventies.

In this article I would like to show that the modification-potential of idiomatic NP-heads, such as **beans**, is dependent on their semantic relationship to the overall idiomatic meaning. Arguing from a cognitive-linguistic perspective, I will suggest that NPs in idioms can be elaborated by premodifiers and postmodifiers if they can be attributed an idiom-internal figurative meaning. This, however, is only possible if the overall semantic structure of a given idiom can be (re)motivated and rendered analysable. The article thus takes position on the current theoretical and psycholinguistic debate centred around the syntactic behaviour of idioms. It opposes accounts - stemming from a generative background in particular - that regard idioms as semantic units by definition. Proponents of this idioms-as-semantic-units view claim that adnominal modification can only be understood as a form of adverbial modification of the whole idiomatic meaning, or that it merely constitutes a form of wordplay. In contrast, the position advocated here is shared by those grammarians and psycholinguists who suggest that many idioms can be attributed an analysable or decomposable semantic structure. The cognitive-linguistic approach offered here sheds light on this controversy by proposing an explanatory model of idiom representation and variation.

My cognitive linguistic model of occasional adnominal modification in idioms is challenged by the fact that both 'motivation' and 'analysability' are not generally accepted concepts in phraseological research. For instance, Čermák claims that one

should abandon “the view that idioms are motivated through their constituents”. Similarly, the concept of analysability has often been rejected. Among many others, Schenk claims that all idioms must be described as non-decomposable semantic units.

Ernst discusses three types of idiomatic extension through adjectival premodification: “external modification”, “internal modification”, and “conjunction modification”. In the following discussion, I will merely concentrate on the two former modification types. Moreover, I will relate the second modification type to adnominal modification in general rather than restricting it to adjectival premodification only.

External and internal modification constitute two alternative, systematic types of head-modifier relationships in adnominally-extended idiom-variants. In other words, rather than constituting forms of wordplay, external and internal modifications define two distinct ways of how the idiomatic base-form can be systematically adapted to the context of use.

To illustrate external modification, Ernst employs the following examples:

(8) Carter **does not have** an economic leg to stand on.

(9) He **came apart** at the political seams.

With external modification, the premodifying adjective functions as an adverbial which modifies the idiomatic meaning as an entire semantic unit rather than modifying the idiom’s head-noun directly. Thus, (8) can be paraphrased as (8a) and (9) as (9a), respectively:

(8a) *Economically*, Carter does not have a leg to stand on.

(9a) *With regard to political matters*, he came apart at the seams.

As should have become obvious from this sketch, external modification does not directly depend on the internal semantic structure of the idiom. Fulfilling an adverbial function, the premodifying adjective does not directly elaborate the head-noun, but modifies the idiom as a whole. Therefore, external modification can also apply to non-analysable idioms, i.e. idioms that have the status of semantic units.

With internal modification, an idiom’s nominal head is directly modified. Thus, for (10) - (11) it is impossible to re-interpret the premodifiers as adverbials that qualify the whole idiomatic meaning as a unit. Rather, the adjectives apply to the autonomous figurative senses of the respective heads to elaborate them.

(10) When will you get it through your **small** head that this isn't the way to do it!

(11) That’s beside the **immediate** point.

Ernst takes the phenomenon of internal modification as clear evidence against the overly limited view of idioms as semantic units - a view which is predominantly advocated in the generative paradigm.

With the cognitive-linguistic model of occasional adnominal idiom modification in hand, we are now in a position to refer back to the introduction of this article and explain why the instances of adnominal modification in (4) are grammatical, whereas (3) does not trigger an idiomatic reading of *spill the beans*. In (3) the adnominal modifiers *nice brown* and *that my aunt brought me from Spain* do not apply to the idiom-internal figurative sense of *beans*. Therefore, these modifiers cannot fulfil the function of figurative-type specification; they do not adapt the idiomatic meaning to the usage-context in any meaningful way and, as a consequence, must be understood literally [].

Task 3.

Towards a Dynamic Account of Phraseological Meaning: Creative Variation in Headlines and Conversational Humour

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In developing an adequate account of the semantic properties of fixed expressions, linguistic theories in general as well as phraseology as a specific linguistic discipline have started to move away from the traditional view according to which semantic stability features as a prominent characteristic of any kind of fixed expressions. One of the linguistic paradigms, which strongly opposes to a static account of meaning, and which I will be using as the theoretical framework for the present contribution, is *Cognitive Linguistics* (CL).

One of the pillars of CL is the non-restrictive definition of semantic structure as extending well beyond the boundaries of the linguistic system as such. CL rejects the traditional view of meaning as the fixed value of a linguistic expression, determined in terms of truth conditions or internal semantic relations such as synonymy, hyp(er)onymy etc. Instead, as CL identifies the conceptualising subject as the mediating structure between word and world, meaning advances to a *cognitive* structure, which is inherently embedded in a larger context of knowledge, understandings and belief.

Taken to the level of specific linguistic expressions, meaning emerges from the interaction between the so-called *profile* (what is being designated) and the *base* of an expression, which comprises all kinds of conceptual and contextual elements. Accordingly, the meaning of an utterance such as (1) can only be characterised with respect to the broader conceptual background on which this utterance is being used.

(1) *You drink too much*

Depending on the characterisation of relevant knowledge domains such as LAW AND ORDER or MEDICINE or WINE TASTING etc., the sentence in (1) each time activates a different meaning. From a CL viewpoint, instead, a linguistic utterance as such merely functions as a cue the processor uses as a starting point in a process of meaning *construction*.

As a matter of fact, analysability and compositionality represent two different perspectives (top-down vs. bottom-up) on the phenomenon of *isomorphism*, which pertains to the one-to-one relationship between form and meaning of a complex linguistic expression. Next to the principle of *compositionality*, according to which an expression's overall meaning (partially) results from the components' meaning, involving different kinds of specialisation, an expression's degree of *analysability* is determined by the extent to which the interpreter recognises the contribution of single components to the overall phraseological meaning ('co-activation'). Especially with regard to the creation of a motivational link between the overall phraseological meaning and individual components, analysability represents an important semantic operation.

Motivation has traditionally been considered a problematic notion for an adequate semantic description. Motivation can be described as a synchronically and individually determined semantic process, in which language users attempt to make sense of a specific expression by establishing an interpretational link between the well-known overall (phraseological) meaning of that expression and any other linguistic or conceptual element.

Motivational links with a fixed expression's overall meaning can be established on any level of linguistic and conceptual organisation. Most straightforward, in this respect, are expressions such as (4), the motivation of which is achieved through its full analysability in terms of the constituent parts.

(4) *to cast pearls before swine*

This example is motivated by the perfect transparency (top-down isomorphism) between form and meaning, according to which **pearls** corresponds with 'precious things, ...' and **swine** with 'those who cannot appreciate them'. Obviously, some phraseological expressions are only partially analyzable. Although analysability provides an important type of motivational link, both categories do not coincide as an expression's motivation does not necessarily involve one or more constituents.

In order to provide an optimal understanding of motivation as an integral dimension of meaning, it is important to draw attention to the non-identity of the notions **motivation** and **grounding** as the latter is concerned with uncovering an expression's ontogenesis or, in cognitive-semantic terms, its 'experiential ground'. This ultimate ground may consist of some universal bodily experience, or - as far too often neglected in cognitive metaphor theory - a cultural-historical structure as well. It appears that both notions, **grounding** and **motivation**, are quite often confused or not identified as such, leading to erroneous assumptions about the semantic properties of complex expressions.

Crucially, both grounding and motivation of a fixed expression **can**, but do not necessarily need to coincide, as illustrated by the following expression.

In contrast to most formal approaches to language, CL argues that there is no strict boundary between linguistic and contextual information and that language is grounded in discourse and social interactions. This means that dimensions such as the context of speech as well as the conceptual elements which constitute the 'shared knowledge' among interlocutors all play a central role in semantics, and they cannot be separated from the "core meaning" of an utterance.

Quite some research has been done both by linguists and discourse analysts on the different communicative functions of headlines.

Dor (2003) argues that all functions serve the same goal on a higher functional level: headlines are designed to **optimise the relevance** of the stories for the readers.

Consider the headlines in (10)-(11), collected on the basis of a one-week survey of the economy pages of the Financial Times, each of which contains a fixed expression (marked in italics) that contributes to the effect of wit.

(10) Russia **takes froth off** Carlsberg results

(11) Drug case may **cause chronicpain** for Bayer

Throughout the study we have run our analyses both on those utterances, which do and those that do not contain phraseological expressions [].

Task 4.

Fleeing, Sneaking, Flooding. A Corpus Analysis of Discursive Constructions of Refugees and Asylum Seekers in the UK Press, 1996-2005

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Refugees, asylum seekers, immigrants, and migrants (RASIM) coming to the UK have attracted increased press attention in the last fifty years. In general, the presentation of RASIM in the press is negative, having even been termed “negative misinformation”. Most linguistic research on issues of asylum and immigration has taken a critical discourse analysis (CDA) stance, which traditionally carries out a close analysis of a small sample of texts, focusing on aspects such as positive self-presentation and negative other-presentation and argumentative and linguistic strategies employed for predication, labeling, argumentation, perspectivation, and intensification/mitigation.

In terms of corpus-based studies that examine refugees and related identities, Baker and McEnery (2005) carried out an analysis of a relatively small (130,000 words) corpus of British newspaper texts published in 2003, finding quantitative evidence of linguistic patterns being repeatedly used in negative constructions of refugees. A corpus-based approach also helps in addressing criticisms of CDA methodology related to the texts analyzed. More specifically, CDA studies have been criticized for arbitrary selection of texts, which is seen to cast doubts on their representativeness, and the analysis of a small number of texts or text fragments, which cannot be expected to reveal helpful patterns or insights into their frequency or distribution. This study comprised articles relevant to RASIM. In addition, the size and coverage of the corpus (140 million words, containing 175,000 full newspaper articles spanning ten years) ensured that relevant patterns would emerge in the analysis.

Corpus linguistics (CL) can pinpoint areas of interest for further/closer analysis. That is, emerging patterns (e.g., keywords, collocations) lead to the examination of their concordances, or, when needed, the examination of whole texts. The examination will also point to patterns of meaning, use, or attitude. Keyword analyses can reveal statistically significantly more frequent terms in different newspaper types, individual newspapers, or text types and genres within or across newspapers.

Our approach consisted of two separate methodological strands, one which involved a corpus-based analysis, using computer software to investigate wide-scale linguistic patterns and trends in the data, while the other involved a more traditional critical discourse analysis (CDA), which carried out a close analysis of a small sample of texts in the corpus.

Individual newspapers have a vested financial interest in reporting on issues within their readers’ concerns, as well as reflecting their views and attitudes, as newspaper readers tend to read those newspapers that are generally in accord with

their own perceptions and approaches. The power of newspapers over the selection, extent, frequency, and nature of their reporting, coupled with their availability for corpus compilation, make newspapers an excellent source of data for the examination of the construction of refugees and asylum seekers.

As corpus linguistics is more a methodological than a theoretical approach, there is significant overlap between its informing theoretical concepts and its methodological tools. The corpus-based aspect of the project was mainly informed by the notions of *keyness* and *collocation*, and the latter's related notions of *semantic preference* and *semantic/discourse prosody*. However, a number of CDA notions were also utilized when grouping collocates and keywords on the basis of the semantic prosody/preference that they expressed. These were the notions of *topos* and *topic*.

Keyness, in corpus linguistics methodology, refers to the significantly higher/lower frequencies of particular words (termed *keywords*) in one corpus when compared to their frequency in another corpus.

Keyword analysis was used to determine words that were significantly more frequent in broadsheets and tabloids.

As the two broadsheet and tabloid subcorpora were quite large (87 and 30 million words, respectively), a very large number of keywords was expected. In order to limit the number of keywords to be examined, the threshold for keyness was set at an extremely low *p* value ($p \leq 10^{-14}$)—that is, the maximum probability that the keyness of a word was due to chance was one in a hundred trillion. However, even such a strict threshold of statistical significance returned over 1,500 keywords in each comparison.

The collocates of a word contribute to its meaning, and their examination can provide “a semantic analysis of a word”.

Related to collocation are the (overlapping) concepts of semantic preference and semantic/discourse prosody. Whereas collocation is a purely lexical (i.e., formal) relation, semantic preference can be seen as its semantic extension, as it is the relation “between a lemma or word form and a set of semantically related words”

We turn now to the definition of the term *topos* (plural, *topoi*), and the justification of the collation of *topoi*, topics, and metaphors when grouping collocates and keywords within the corpus-based analysis, given that they are treated as different entities in CDA. *Topoi* are “conclusion rules that connect the argument with the conclusion”, they represent “the common-sense reasoning typical for specific issues”, whereas “topics” simply refer to the subject matter of the discussion.

The terms *Eastern* and *Europe* are c-collocates of *IM* only, which indicates regular references to citizens from the new/candidate EU countries coming to the United Kingdom. An examination of concordance lines reveals that the vast majority of *Eastern* occur within *Eastern Europe* and *Eastern European*.

Overall, keywords indicate that tabloids dedicate their discussion of asylum and immigration to issues relating to the number of RASIM, the manner and place of entry to the destination country, their alleged abuse of the asylum/immigration system and

the laws of the country, and the purported threat they pose to the safety and welfare of the citizens of the country. The majority of keywords populate categories reflecting a negative stance toward RASIM.

When we examine the broadsheet keywords, it is clear that there are striking differences. The population and makeup of all other categories indicate a radically different treatment of, and stance toward, RASIM on the part of the two groups of newspapers. For example, broadsheets seem to prefer to use a wider variety of terms to refer to RASIM and use more terms with either positive or neutral connotations [].

Appendix E

Post-experiment questionnaire for students

1. Are you satisfied with the results?
 - yes;
 - no
2. Which tasks were the most difficult in tests?
 - for gist comprehension;
 - for comprehension of a detail;
 - for locating and understanding specific information;
 - for information analysis;
 - for information integration
3. Which tasks were the most difficult in the system?
 - for academic discourse analysis;
 - for developing strategic awareness;
 - for developing lexical skills;
 - for developing grammatical skills;
 - for developing prognostic skills;
 - for developing skimming skills;
 - for developing scanning skills;
 - for developing reading for a detail skills;
 - for developing critical reading skills (writing summaries etc.);
 - for information integration
4. Do you agree with the statement on the necessity of focusing on the development of:
 - subject specific vocabulary;
 - subject knowledge
5. Can you assess the suggested system of exercises as positive?
 - yes;
 - no

6. If your previous answer is No, explain why _____
7. Do you think it is necessary further develop academic reading comprehension skills?
- yes;
 - no
8. Did you use the suggested additional exercises?
- yes;
 - no
9. If the previous answer is yes, explain why.
- the teacher recommended;
 - to get a good mark;
 - to develop skills as we will have to work with academic texts in future;
 - it was interesting;
 - other _____
10. If the answer to question 8 is No, explain why:
- I think I have a sufficient level of academic reading competence;
 - I did not have enough time;
 - the tasks were not interesting;
 - I thought the obligatory exercises would help me to develop the necessary skills;
 - Other _____

Thank you for cooperation!

Appendix F

Post-experiment survey for students (answers)

1. Are you satisfied with the results?
 - yes (81 %);
 - no (19 %)
2. Which tasks were the most difficult in tests?
 - for gist comprehension (3 %);
 - for comprehension of a detail (29 %);
 - for locating and understanding specific information (46 %);
 - for information analysis (61 %);
 - for information integration (92 %)
3. Which tasks were the most difficult in the system?
 - for academic discourse analysis (7 %);
 - for developing strategic awareness (10 %);
 - for developing lexical skills (15 %);
 - for developing grammatical skills (14 %);
 - for developing prognostic skills (0 %);
 - for developing skimming skills (17 %);
 - for developing scanning skills (22 %);
 - for developing reading for a detail skills (36 %);
 - for developing critical reading skills (writing summaries etc.) (76 %);
 - for information integration (83 %)
4. Do you agree with the statement on the necessity of focusing on the development of:
 - subject specific vocabulary (88 %);
 - subject knowledge (81 %)
5. Can you assess the suggested system of exercises as positive?
 - yes (92 %);
 - no (8 %)

6. If your previous answer is No, explain why _____
7. Do you think it is necessary to further develop academic reading comprehension skills?
 - yes (93 %);
 - no (7 %)
8. Did you use the suggested additional exercises?
 - yes (58 %);
 - no (42 %)
9. If the previous answer is yes, explain why.
 - the teacher recommended (79 %);
 - to get a good mark (85 %);
 - to develop skills as we will have to work with academic texts in future (24 %);
 - it was interesting (31 %)
10. If the answer to question 8 is no, explain why:
 - I think I have a sufficient level of academic reading competence (24 %);
 - I did not have enough time (64 %);
 - the tasks were not interesting (24 %);
 - I thought the obligatory exercises would help me to develop the necessary skills (76 %).

Appendix G

The Results of the Experiment

Table G 1

Criterion referenced pre-test results in EG–1

Students	Scores by criteria					Total	
	comprehension of the gist	comprehension of a detail	locating and understanding specific information	information analysis	information integration	Total scores	Learning coefficient
Student 1	6	4	5	10	9	34	0,49
Student 2	6	5	6	12	10	39	0,56
Student 3	5	5	5	11	9	35	0,50
Student 4	5	7	5	9	8	34	0,49
Student 5	4	6	7	8	10	35	0,5
Student 6	7	7	7 35	11	12	44	0,63
Student 7	4	3	5	7	7	25	0,36
Student 8	5	7	6	14	12	44	0,63
Student 9	7	8	7	14	15	51	0,73
Student 10	5	6	5	10	9	35	0,5
Student 11	7	7	6	14	13	47	0,67
Student 12	8	7	8	14	12	49	0,7
Student 13	6	5	6	11	8	37	0,53
Student 14	4	6	5	8	7	30	0,43
Student 15	6	8	9	13	15	51	0,73
Student 16	5	5	4	11	9	34	0,49
Student 17	7	6	5	10	11	39	0,56
Student 18	8	6	8	13	12	47	0,67
Student 19	9	7	6	12	14	48	0,69
Student 20	7	8	8	15	12	50	0,71
Student 21	5	4	5	10	10	34	0,49

Student 22	4	5	6	9	9	33	0,47
Student 23	6	4	4	7	11	32	0,46
Student 24	5	6	4	12	10	37	0,53
Student 25	4	3	4	9	8	28	0,4
Student 26	7	5	3	12	13	40	0,57
Student 27	8	6	4	9	11	38	0,54
Student 28	7	7	7	13	8	42	0,6
Student 29	3	4	3	10	9	29	0,41
Average scores	5,9	5,8	5,6	11	10,4	38,7	0,55
Maximum scores	10	10	10	20	20	70	1

Table G 2

Criterion referenced pre-test results in EG-2

Students	Scores by criteria					Total	
	comprehension of the gist	comprehension of a detail	locating and understanding specific information	information analysis	information integration	Total scores	Learning coefficient
Student 1	3	4	7	8	7	29	0,41
Student 2	7	6	8	11	11	43	0,61
Student 3	8	6	6	12	11	43	0,61
Student 4	5	4	4	8	10	31	0,44
Student 5	4	3	3	7	6	23	0,32
Student 6	8	6	7	14	13	48	0,69
Student 7	4	5	5	10	9	33	0,47
Student 8	8	7	8	12	14	49	0,7
Student 9	6	5	7	8	9	35	0,5
Student 10	8	7	8	13	15	51	0,72
Student 11	6	4	5	9	8	32	0,46
Student 12	7	8	6	14	12	47	0,67
Student 13	8	8	7	12	14	49	0,7
Student 14	7	6	8	14	11	46	0,66
Student 15	4	4	3	8	9	28	0,4
Student 16	7	8	5	11	12	43	0,61
Student 17	8	6	7	12	10	45	0,64
Student 18	6	7	5	9	8	35	0,5
Student 19	3	4	4	7	8	26	0,37
Student 20	8	8	7	12	13	48	0,69
Student 21	7	5	6	7	10	35	0,5
Student 22	6	5	7	13	14	45	0,64
Student 23	5	4	6	9	8	32	0,46
Student 24	6	7	7	9	10	39	0,56
Student 25	7	8	6	8	9	38	0,54

Student 26	8	7	8	12	8 269	43	0,61
Student 27	7	8	7	14	14	50	0,71
Student 28	7	8	4	11	12	42	0,6
Student 29	7	7	6	12	13	45	0,64
Student 30	6	5	6	9	7	33	0,47
Average scores	6,4	6	6,1	10,5	10,5	39,5	0,56
Maximum scores	10	10	10	20	20	70	1

Table G 3

Criterion referenced post-test results in EG–1

Students	Scores by criteria					Total	
	comprehension of the gist	comprehension of a detail	locating and understanding specific information	information analysis	information integration	Total scores	Learning coefficient
Student 1	9	7	8	17	15	56	0,8
Student 2	9	8	8	16	17	58	0,83
Student 3	10	8	8	16	14	56	0,8
Student 4	9	8	7	14	13	51	0,73
Student 5	9	10	10	14	13	56	0,8
Student 6	9	9	8	17	18	61	0,87
Student 7	8	6	9	13	12	48	0,69
Student 8	7	8	9	16	17	57	0,81
Student 9	10	10	9	18	17	64	0,91
Student 10	9	8	9	15	16	57	0,81
Student 11	10	9	9	17	18	63	0,9
Student 12	9	9	10	15	15	58	0,83
Student 13	8	9	8	14	13	51	0,73
Student 14	8	7	7	16	15	53	0,76
Student 15	6	8	9	13	15	51	0,73
Student 16	9	8	6	16	17	56	0,8
Student 17	9	10	9	17	16	61	0,87
Student 18	10	8	9	15	15	57	0,81
Student 19	9	8	10	18	16	61	0,87
Student 20	10	10	8	16	14	58	0,83
Student 21	9	8	8	17	17	59	0,84
Student 22	9	7	8	15	17	56	0,8
Student 23	9	8	9	14	16	56	0,8
Student 24	8	9	7	18	15	57	0,81

Student 25	8	6	8	14	16	52	0,74
Student 26	10	9	9	17	17	62	0,89
Student 27	9 239	9	10 229	17	16	61	0,87
Student 28	10	10	10	16	15	61	0,87
Student 29	7	8	7	14	15	51	0,72
Average scores	8,8	8,3	8,5	15,7	15,5	56,8	0,81
Maximum scores	10	10	10	20	20	70	1

Table G 4

Criterion referenced post-test results in EG–2

Students	Scores by criteria					Total	
	comprehension of the gist	comprehension of a detail	locating and understanding specific information	information analysis	information integration	Total scores	Learning coefficient
Student 1	6	8	8	13	11	46	0,66
Student 2	10	8	8	15	14	55	0,79
Student 3	10	8	9	16	14	57	0,81
Student 4	8	6	6	14	12	46	0,66
Student 5	7	5	5	13	14	44	0,63
Student 6	10	10	8	18	17	63	0,9
Student 7	8	9	6	17	14	54	0,77
Student 8	10	10	9	17	16	62	0,89
Student 9	8	7	8	13	14	50	0,71
Student 10	9	9	9	16	14	57	0,81
Student 11	9	7	9	15	15	55	0,79
Student 12	10	8	8	16	15	57	0,81
Student 13	9	8	8	15	16	56	0,8
Student 14	9	8	9	16	14	56	0,8
Student 15	7	8	6	13	14	48	0,69
Student 16	10	9	7	14	17	57	0,81
Student 17	10	9	8	16	13	56	0,8
Student 18	9	9	8	14	15	55	0,79
Student 19	7	8	6	14	13	48	0,69
Student 20	9	8	9	17	16	59	0,84
Student 21	9	8	9	13	12	51	0,73
Student 22	9	8	8	16	16	57	0,81
Student 23	8	7	7	12	13	47	0,67
Student 24	9	9	8	14	16	56	0,8

Student 25	9	8	9	14	13	53	0,76
Student 26	10	8	8	15	13	54	0,77
Student 27	10	10	9	18	17	64	0,91
Student 28	9	10	7	15	13	54	0,77
Student 29	8	8	9	14	15	54	0,77
Student 30	9	9	6	12	11	47	0,67
Average scores	8,8	8,2	7,8	14,8	14,2	53,8	0,77
Maximum scores	10	10	10	20	20	70	1