

UNIVERSITY OF TARTU
DEPARTMENT OF ENGLISH

**HOW TO WRITE READER-FRIENDLY TEXTS:
COMMON PROBLEMS IN THE ENGLISH ACADEMIC WRITING
OF ESTONIAN WRITERS**

MASTER' S THESIS

KÄRT RUMMEL
SUPERVISOR: ÜLLE TÜRK, MA

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PREFACE

This research paper focuses on the rhetorical and cross-cultural aspects of academic written discourse and explores common problems in the English academic writing of Estonian academics and undergraduate students. It attempts to clarify Estonian writers' needs and behaviours in English written discourse in order to upgrade academic writing instruction in tertiary study, develop academic writers and improve the quality of their written texts.

The thesis aims to find answers to the following questions:

1. What are common problems in the English academic texts of Estonian writers? What do Estonian writers perceive as their main difficulty in writing in English?
2. How knowledgeable are Estonian writers about the Anglo-American academic writing norms, discourse patterns, discourse communities and genre conventions?

The thesis is comprised of five parts:

The introduction addresses the importance of English academic writing competence in international communication. It looks briefly at the rhetorical features of writing, deals with the different nature of the spoken and written discourses, and outlines the cross-cultural aspects of L2 written discourse.

Chapter I provides a theoretical background to the Anglo-American academic writing style with a special focus on the areas of Anglo-American academic writing traditions and knowledge bases of writing, academic discourse communities, specific genre conventions, and written text organisation, argumentation and style. The overview is based on the works of prominent writing scholars Ulla Connor, M.A.K. Halliday, Ruqaiya Hasan, Michael Hoey, Ken Hyland, Robert Kaplan, Anne Mauranen, Ann Raimes, Tony Silva, John Swales, Chris Tribble, Eija Ventola, Ron White, and others. With the emphasis on the

significance of text-level rhetoric of academic texts, the overview serves as a basis for an empirical study into the English writing of Estonian writers.

Chapter II presents the results of the empirical study, the focus of which was to examine the experiences and practices in the English academic writing of academics and undergraduate students of the Tallinn University of Technology (TTU). The aim of the study was to investigate what concerns Estonian writers have in composing academic prose and how knowledgeable they are about the Anglo-American academic writing conventions.

Drawing on the analysis of the data from the questionnaires, interviews and student writing samples, Chapter III discusses the common problems that Estonian writers encounter in composing academic texts in English.

The Conclusion summarises the findings of the study, advocates the enhancement of the rhetoric-driven English academic writing instruction in Estonia and proposes perspectives for further research in the field.

The thesis includes 12 Appendices that present illustrative material on Anglo-American writing, the sample questionnaires and the data collected in the empirical study.

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LIST OF ABBREVIATIONS

B2	–	The Common European Framework of Reference, Level B2
C1	–	The Common European Framework of Reference, Level C1
EAP	–	English for Academic Purposes
L1	–	First language
L2	–	Second language/foreign language
Q	–	Question
TTU	–	The Tallinn University of Technology

INTRODUCTION

The need for writing in English

Today, communication across languages and cultures has become more important than ever before; as a result, the ability to function in a foreign language is becoming widely recognised as a vital skill for educational and professional purposes. Among the foreign languages taught in Estonia, a special position is held by English, which is widely recognised as a *lingua franca* in many spheres of communication. The academic development depends crucially on *writing* and therefore members of the academic discourse community are expected to be able to produce effective written texts in their field. As Hadley (2004: 2) has remarked, “a written text conforms to certain rules that most good writers unconsciously follow and native readers unconsciously expect to find”. It is clear that writing an extended quality text that adheres to the writing conventions of the target community is a difficult task to accomplish even in the writer’s first language, let alone in the language foreign to the writer. However, Estonian being a small nation with fewer than one million speakers of Estonian as L1, most specialist texts have to be published in a foreign language, most often in English.

It is now well established that English is the primary language of science and technology and the universal instrument for international communication and publication. Evidence shows that the use of English for scientific publication is constantly growing; for instance, at least 80% of all scientific articles or abstracts are published in American journals, which indicates the privileged position of the model of Anglo-American academic writing (see, e.g., Crystal 1997). With reference to the dominant role of English, Swales declares:

/.../ the coming generation of the world’s researchers and scholars need – with a relatively few exceptions in the arts and humanities – to have more than adequate [italics mine] professional skill in the English language if that generation is to make its way without linguistic disadvantage in its chosen world. (Swales 1990: 10)

Thus, in order to master the techniques of effective writing, the writer has to be familiar with the underlying principles of English written discourse.

Quite often it is assumed that the good command of grammar and vocabulary ensures the good quality of written texts as well. Indeed, the repetitive occurrence of sentence-level errors can distract the reader from following the writer's logic. It has been well documented that academic readers draw conclusions about writers' intellectual ability on the basis of structural and grammatical problems (see, e.g., Sternglass 1997, Zamel 1998, quoted in Myles 2002: 9) and often criticise the final product on the sole basis of language deficiency.

However, language competence is a complicated phenomenon involving a number of different abilities such as literacy, speaking proficiency and cross-cultural awareness. Writing is a complex activity, involving different cognitive and cultural components; thus, it is difficult to judge what constitutes effective writing performance. The argument is that L2 writers often experience difficulty in expressing themselves in English adequately since they have a different language competence than native English writers. While native writers have the inherent ability to handle the grammar and lexis of English when they begin to write in L1, non-native writers have to write and develop their linguistic competence simultaneously. As the complexity of the L2 writing content grows, the possibility of being misinterpreted by the English-speaking audience increases significantly. This circumstance has, for instance, been observed by Lorentz who draws attention to the following paradox:

./.../ experienced assessors of non-native texts have always found it difficult to see why otherwise perfectly intelligent human beings, who have mastered the biggest part of English syntax and morphology, should so often slip up in the realm of coherent argument. (Lorentz 1996: 55)

A well-known model of language ability is that of *communicative competence* which was developed for language teaching by Canale and Swain (1980), Chappelle (1993) and Savignon (1997). According to this model, grammatical (or linguistic) competence is only

one of the competences needed for language use. Other competences include discourse, sociocultural and, in some versions of the model, strategic competences. In short, *discourse competence* denotes the ability to understand how texts are constructed beyond and above the sentence level and how they relate to the context of use. Partly overlapping with the former, *sociocultural competence* refers to the ability to express, interpret and negotiate meaning according to cultural norms and expectations. This competence is required, for example, in order to vary the language according to the level of formality and to express solidarity with peer groups. Finally, *strategic competence* involves the ability to compensate for the incomplete knowledge in any of the language areas (see Appendix 1 for Chapelle et al. 1993 version of the model).

As mentioned earlier, linguistic competence certainly affects L2 writers' ability "to cope with the demands of academic discourse, and receive recognition as well-informed, critical thinkers" (Myles 2002: 9) and, therefore, most writers aim to produce error-free texts. Even though mastering grammar may be a great challenge for a non-native writer, learning to write well in academic settings requires not merely linguistic competence but a combination of all the above competences. Research (see, e.g., Grobe 1981, Shaugnessy 1977, both quoted in Pilus 1993; Spack 1988) indicates that correcting the sentence-level surface errors only does not improve the readability of the text and linguistic proficiency is not the only pre-requisite of good writing. Becoming a proficient writer in academic English requires, first and foremost, knowledge of how to write for the audiences that are governed by the English academic norms, what features native speakers of English associate with coherent writing and how English-speaking writers organise their thoughts.

According to Myles (2002: 1), the ability to write is usually "learned or culturally transmitted as a set of practices in formal instructional settings or other environments". In the same way, writing conventions reflect the social and cultural background of the writer,

which may limit or enhance his or her comprehension of other writing cultures and the ability to produce texts acceptable to the norms of the target culture. This is because different cultures and discourse communities value different ways of expressing thoughts and exploit different rhetorical patterns for putting ideas and concepts into written form.

Hayes has illustrated writing as a form of social behaviour in the following words:

[Writing] is also social because it is a social artifact and is carried out in a social setting. What we write, how we write, and who we write to is shaped by social convention and by our history of social interaction /.../ the genres in which we write were invented by other writers and the phrases we write often reflect phrases earlier writers have written. (Hayes 1996:5, quoted in Weigle 2002: 19)

Many of the common problems of non-native writers may result from their application of the typical conventions of writing in their native language into writing in the target language. Thus, as Wennerstrom (2003: 124) believes, even those writers whose texts are considered brilliant in one educational system may struggle with the academic genres of another system. A major problem here appears to be that, to many non-native writers, cross-cultural nuances may hinder international communication and become an extra burden in their academic development.

Spoken versus written genres of discourse

Drawing on the work of Halliday and Hasan (1985), language is a *functional* system that is used to fulfil specific purposes. At this point, Carter (1993: 97) describes language by four distinct categories, which contribute to its effective functioning: language as *system*, *meaning*, *discourse* and *variety*. First, he suggests that language is *systematically* organised, and meaningful language can only be created because of specific patterns. Another observation is that language conveys *meanings* by means of variety within the system and, therefore, the basis of language acquisition and development is an active search for meaning. Language as *discourse* in Carter's (ibid.: 98) interpretation refers to "meaningful choices from the varieties within the language system [which] regularly have ideological consequences and are related to the operation of social and political power

within a speech community”. Finally, language *varies* according to purpose, function, place, time and the properties of the context in which it is used. It will also vary significantly according to *field* (subject matter), *tenor* (participant relations) and *medium* (*spoken or written*).

For many years most linguists have maintained that written language is simply a reflection of oral language, whereas most education researchers have taken the opposite position that “written language is the true representation of the correct forms of language” (Grabe and Kaplan 1996: 15). Recent research (see, e.g., Biber 1995, quoted in Wennerstrom 2003; Halliday 1989; Kress 1989, quoted in Grabe and Kaplan 1996), however, has focused on different properties of oral and written languages and various ways of how these media vary and overlap dependent on functional dimensions and register variation. According to Olson (1994, quoted in Grabe and Kaplan 1996: 180), “written language is not merely transcribed oral language; on the contrary, over time, written language has acquired a number of unique functions not shared by oral language”. Consequently, there are certain crucial distinctions between spoken and written discourses, and dependent on the specific genre, a number of lexicogrammatical and rhetorical features manifest themselves differently in written versus spoken styles. These variations occur in different structural and organisational patterns, different frequencies of use of various language features, different production constraints and different registers.

Language requires a combination of formal structure and communicative application; at the same time, research has shown that oral and written languages serve different communicative functions. As Brown and Yule (1983) point out, in communication, speech is used largely for the establishment and maintenance of human relationships (i.e., ‘for interaction’), whereas written language is used for working out and transference of information (i.e., ‘for transaction’).

The nature of writing seems to lie in Cooper's (1979, quoted in Grabe and Kaplan 1996: 202) basic question "*Who writes what to whom, for what purpose, why, when, where, and how?*". Kaplan depicted the parameters involved schematically as seen in

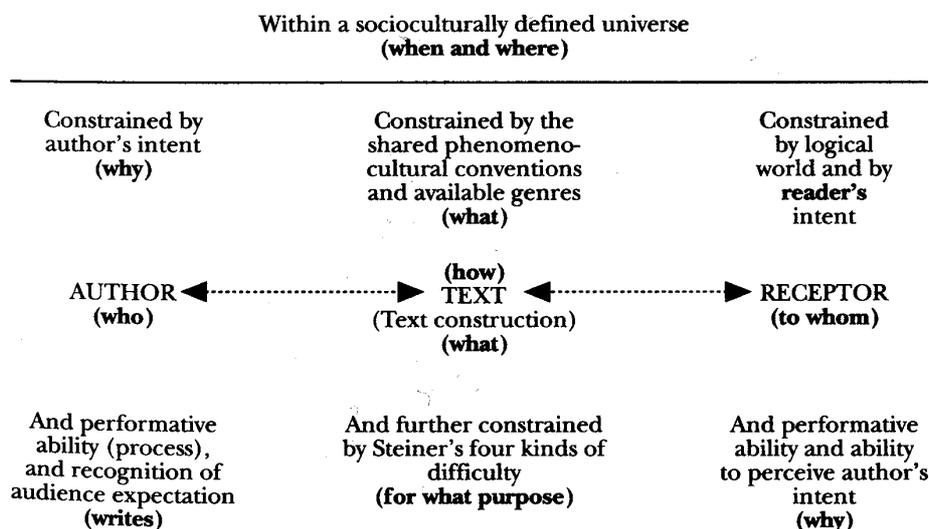


Figure 1. Model of parameters involved in writing (Kaplan 1991, quoted in Grabe and Kaplan 1996: 215).

Figure 1. In providing the background to the nature of writing, Grabe and Kaplan (ibid.: 202) refer to 'the rhetorical triangle' which comprises *textual structure, cognitive processing and social contexts*. In this model, writing is treated as an interaction between *writer, reader, subject matter and text*. Although most writing research (e.g., de Beugrande 1984, Bereiter and Scardamalia 1987, Flower 1994) has not focused on the combination of the three but rather emphasised isolated aspects of it, Witte (1992, quoted in Grabe and Kaplan 1996: 203) has suggested that a theory of writing "needs to *synthesize* [italics mine] the cognitive, social, and textual (linguistic) factors".

It seems important to mention that writing is more complex than speaking as it exhibits a variety and richness of specific structural forms. Wennerstrom highlights this by drawing on the research findings of a number of writing scholars on what characterises the written mode as opposed to the spoken mode:

1. specific rhetorical structures (e.g., paragraphs);
2. explicit cohesive devices (e.g., 'however', 'furthermore', etc., in academic essays);
3. frequency of specific grammatical structures;
4. frequency of nominalizations in scientific writing;
5. parallel structures, sentential organization, and embedded clauses;
6. linguistic features common to certain text types (see e.g., corpus linguistics data);
7. specific relationship between the speaker/writer and the audience.

(Wennerstrom 2003: 8)

In a similar vein, Riley (1996: 125) lists three criteria in terms of an opposition between speech and writing such as “grammaticality, gravity of errors and availability of time for encoding and remediation”. In general, writers have more opportunity than speakers to review and revise their final product. “The luxury of revision”, however, may not necessarily be an advantage since, according to Wennerstrom (2003: 9), “there is higher audience expectation for written text and the readers of finished written products may be less tolerant of the so-called errors”.

It is certainly true that audience awareness is of critical importance in writing reader-friendly texts since, different from speaking, writing is a monologue-type discourse without direct contact between the writer and the reader. Although the written language permits communication over time and space, written texts can be examined mostly out of their original contexts. In such communication, the writer has to compensate for the physical absence of the audience entirely by linguistic resources. Lorentz (1999: 55) notes that writers, therefore, have “every reason for trying to make their ideas, intentions and arguments unmistakably clear” to the reader. More importantly even, Turk and Kirkman (1989: 101) maintain that “if we want to make our writing as efficient as possible, we should make reading as easy as possible”.

In the writer/reader relationship, the writer influences the reader by the selection and organisation of material, signposting and variation of emphasis; the text itself contributes to effective communication both through the language (structures and vocabulary) and the physical appearance (layout, etc.); and the reader responds to the text based on his/her

motivation, attitudes and also mental state. Both actors, the writer and the reader, applying the overall knowledge of the typical genre conventions (e.g., layout, specific ways of organising thought and formulating intention) contribute to the mutual transaction of ideas. In this aspect, Wall (1981: 53, quoted by Pilus 1993:1) outlines the inherently complex characteristics of writing which “range from mechanical control to creativity, with good grammar, knowledge of subject matter, awareness of stylistic conventions and *various mysterious factors in between*”[italics mine].

English written discourse and L2 writer

At present, much of the literature on L2 writing in English emphasises writing as a social and cultural phenomenon; however, both aspects of writing have brought about a lot of controversy. Quite a number of scholars (see, e.g., Krashen 1984) argue even that writing competence is a general notion that is not language specific but is abstract knowledge that a writer has about writing. It seems to be true that in many cases writers are beset with similar difficulties in creating L1 and L2 texts and the low quality of text is inherent already in the original L1 text.

In effect, for quite a long time, the dominant assumption was that L1 and L2 writing for all intents and purposes are the same. This approach has led L2 writing practitioners to adopt practices from L1 and rely on L1 composition theories tied to the Anglo-American writing traditions, mostly those of North American colleges and universities. Silva, among other writing scholars, has declared that there are certain similarities in L1 and L2 writing:

There is evidence to suggest that L1 and L2 writing are similar in their broad outlines: for instance, it has been shown that both L1 and L2 writers employ a recursive composing process, involving planning, writing, and revising, to develop their ideas and find the appropriate rhetorical and linguistic means to express them. (Silva 1993: 657)

However, Silva (ibid.) also reports a number of “salient differences between L1 and L2 writing with regard to both composing processes /.../ and features of written texts [such as] *fluency, accuracy, quality and structure*”. Although the writing behaviour is similar, L2

composing is clearly more difficult and less effective in terms of *quality*. As a result of poor quality, L2 written texts typically receive lower ranking when compared to L1 written texts.

Research (e.g., Connor 1996) indicates that the ability to write in L2 is determined not only by certain basic factors such as the level of acquisition of L2 but also by the relative similarity or difference between the two languages. Indeed, writing in a language that is closely related to one's native language in terms of grammar, vocabulary, and the writing system is clearly easier than writing in a language that is vastly different. Nevertheless, it appears that although a competent L1 writer is likely to be a competent L2 writer, the L2 writing process differs from the native language writing process considerably. With regard to that, Raimes (1991) suggests that L2 writers should not be viewed as L1 writers, nor should they be seen as 'basic writers'.

While L1 writing process includes producing content, drafting ideas, revising writing, choosing appropriate vocabulary, and editing text, L2 writing involves all of these elements combined with L2 processing issues. Formulating ideas coherently in L2 can be difficult for writers because they have to acquire proficiency also in the use of the language and writing strategies, techniques and skills. In this connection, Beare (2002) seems to believe that if writers are proficient in their L2 and knowledgeable about the rhetorical structure of this language, the transfer of skills may be expected. Yet, Mauranen doubts the assumption that good academic writers are good in both L1 and L2:

This myth is generally closely associated with the idea that *good thinking* [italics mine] results in *good writing* [italics mine], and therefore the foreign language errors of good writers can only appear on the surface of the text, or in the lexis and grammar and similar features. (Mauranen 1996: 225)

Instead, she believes that writers' L1 discourse-constructing skills do not automatically transfer to L2 due to the deficient L2 competence on the whole text level. Thus, it is not surprising that in L2, writers are operating mostly on the surface level (i.e., sentence level) of the text, focusing on bottom-up strategies which, in turn, may cause them extra

problems in whole text management. Further, there cannot be an easy explanation for all non-native coherence problems, as based on Lorentz (1999: 56), “many patterns that are felt to be deviant seem not to be L1-motivated at all”.

Contrastive rhetoric

The literacy research (e.g., Scollon and Scollon 1981, Gee 1990, quoted in Grabe and Kaplan 1996: 185) has provided evidence that variation in discourse stems from sociocultural contexts. By now, a number of writing researchers (e.g., Grabe and Kaplan 1996, Leki 1992, Mauranen 1996, Ventola 1996) have agreed that many aspects of writing are influenced by culture and that cultural expectations can have a consequence for the organisation of a text into a meaningful whole (i.e., *coherence*). Moreover, writing experts have pointed out that variation in writing across cultures does not reflect differences in thought patterns but rather “cultural preferences, which make greater use of certain options among the linguistic possibilities” (Grabe and Kaplan 1996: 184). In the same way, Weigle (2002: 21) advocates that variations in writing cultures are acquired primarily through *the educational system*, either directly “as in English, where certain rhetorical patterns are explicitly taught”, or indirectly through culture-specific patterns of discourse.

Contrastive rhetoric research focuses on distinctive features and established rhetoric principles of different writing cultures and communities. In other words, studies in contrastive rhetoric compare the realisation of genre-specific texts in different linguistic and cultural contexts (see, e.g., Swales 1990) and help “to uncover the cultural dimension of textual organization as revealed in the structure and form of the overall text as well as in the presence and sequencing of specific rhetorical ‘moves’”(Bronson 2001:1).

The notion of contrastive rhetoric was first introduced by Kaplan (1966) and his associates, who drew attention to the distinctive differences in written discourse of students of different cultural backgrounds. Kaplan (1966, quoted in Silva 1993: 663) described the thought patterns of L1 and L2 writers as “*linear* (for native speakers of English), *parallel* (for native speakers of Semitic languages), *indirect* (for native speakers of Oriental languages), and *digressive* (for native speakers of Romance languages and Russian)” as in Figure 2. Although Kaplan’s traditional contrastive rhetoric has been criticised on several

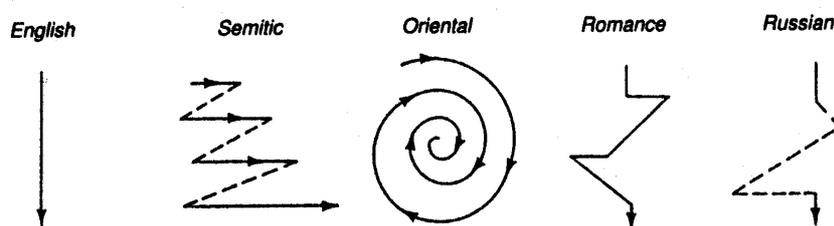


Figure 2. Cross-cultural differences in paragraph organisation.

occasions and he has since modified his earlier position in many aspects of it, the principle of *linear development* of the English prose introduced by the scholar appears to be the most universal rhetorical pattern to be followed by writers. Kaplan and Ostler have characterised this pattern of thought in the following words:

/.../ a clearly defined topic, introduction, body which explicates all but nothing more than the stated topic, paragraphs which chain from one to the next text, and a conclusion which tells the reader what has been discussed */.../* no digression, no matter how interesting, is permitted on the grounds that it would violate unity. (Kaplan and Ostler 1982:14, quoted in Swales 1990: 65)

Even though comparative research of L1 and L2 writing is a fairly recent phenomenon, published research on it gives a lot of information about the different ways in which the written products of different languages are structured. However, as Raimes (1991: 418) asserts “a broad use of contrastive rhetoric as a */.../* consciousness-raising tool

can point to linguistic variety and rhetorical choices; a narrow use would emphasize only prescriptions aimed at counteracting L1 interference”.

Discourse communities

In broad terms, a *discourse community* can be determined by shared interests, by opportunity and frequency of communication and by genre and stylistic conventions, which White (1997) defines as *norms, forms (genres) and entry requirements*. This group of communicators can be viewed as a distinct segment of society such as, for instance, the Estonian language discourse community or the L1 undergraduate students’ discourse community. Similarly, a discourse community can be based on the medium of interaction (spoken or written), communicative context (e.g., general/discipline-specific; non-academic/academic; L1/L2; informal/formal, etc.) or discourse experience (novice/expert).

In writing research, the term ‘*discourse community*’ has been defined in different ways dependent on what characteristics determine membership of such a group. Burgess, for example, has adopted Barton’s definition which describes *discourse community* as follows:

A discourse community is a group of people who have texts and practices in common, whether it is a group of academic, or the readers of teenage magazines. In fact, discourse community can refer to the people a text is aimed at; it can be the people who read a text; or it can refer to the people who participate in a set of discourse practices both by reading and writing. (Barton 1994: 57, quoted in Burgess 2002: 201)

A narrower definition is provided by Joliffe and Brier (1988, quoted in Flowerdew 2002: 201) who suggest that discourse community corresponds roughly to the concept of *audience* in rhetoric. Swales has addressed the specific parameters of a discourse community as follows:

1. A discourse community has a broadly agreed set of public common goals /.../;
2. A discourse community has mechanisms of intercommunication among its members /.../;
3. A discourse community uses its participatory mechanisms primarily to provide information and feedback /.../;
4. A discourse community utilizes and hence possesses one or more genres in the communicative furtherance of its aims /.../;
5. A discourse community has acquired some specific lexis /.../;

6. A discourse community has a threshold level of members with a suitable degree of relevant content and discursal expertise.

(Swales 1990: 24-27)

Although research into *academic written discourse* is a relatively new phenomenon, a number of writing researchers (e.g., Porter 1986, Swales 1990, Scollon and Scollon 1995, White 1997) have succeeded in describing the specific nature of the academic discourse community. For instance, in the words of Porter, an academic discourse community

.../ shares assumptions about what objects are appropriate for examination and discussion, what operating functions are performed on those objects, what constitutes 'evidence' and 'validity', and what formal conventions are followed. A discourse community may have a well-established *ethos*; or it may have competing factions and indefinite boundaries. (Porter 1986: 39, quoted in Swales 1990)

According to Hyland (2003: 25), this community can be defined as “like-mindedness among writers and readers, sometimes called *membership*, which is essential for understanding the specialist background knowledge [in order] to encode and decode texts appropriately”. Although it seems to be impossible to determine the true membership of an academic discourse community, Myers (1989: 3) attempts to divide the members into two broad groups. The first group includes a general scientific audience with general knowledge of the area concerned, whereas the other, much smaller group involves the researchers “who *.../* are dealing with the same problem or closely related problems.” Swales (1990: 22) points out that the discourse community, which comprises specialists in the discipline, “defines the parameters, the discourse of solidarity and of institutionalized norms of behaviour, and only established members of that community may flout the rules“. Reflecting on the importance of genre-awareness, Widdowson (1996, quoted in Honka 1999: 23) argues for learners “to be empowered” by these norms of behaviour.

Although the notion of a discourse community appears to be a widely explored area in Anglo-American writing research, it has still remained a controversial issue. Some researchers (see, e.g., Cooper 1989, quoted in Grabe and Kaplan 1996), for instance, have expressed reservations and concerns about the nature of a discourse community, in whether

or not it can be defined and whether undergraduate students as novice academic writers should be exposed to its specific norms. Grabe and Kaplan (1996: 180) believe that language is neither universally distributed across cultures nor universally distributed in discourse communities. This argument is supported by Bhatia (2002) who maintains that while certain overlapping appears between discourses, distinct conventions (e.g., disciplinary knowledge, range of genres, etc.) characterise different groups of communicators.

The recent emphasis in English academic writing research has been to create awareness of the communicative context of writing rather than deal with the intricacies of specific discourse communities (see, e.g., Cooper 1989, quoted in Grabe and Kaplan 1996). In this respect, an understanding of what might be considered an ‘academic common core’, specific to most of the discourse types in the academia, would be especially relevant for L2 academic writers. This seems to be in contrast with the assumption that there is no general literacy to handle academic discourse, but a range of literacies to handle disciplinary variation in academic discourse (see, e.g., Bhatia 2002). In that sense, expertise in academic writing would involve knowledge about specific interdisciplinary conventions as well. Therefore, not only socio-cultural but also discipline-specific boundaries may pose problems for academic writers, independent of their cultural background. In the words of Grabe and Kaplan (1996: 111), for some writers, “continuing problems may well be due to ignorance of the privileged language of the academic community”.

To this date, the issue of how to initiate Estonian writers into English academic discourse community has not gained sufficient attention in L2 writing research in Estonia. Clearly, there are two important aspects to consider. First of all, in order to participate effectively in academic discourse, the Estonian writer should possess a particular body of

field-specific knowledge and be recognised as a member of the community. Furthermore, to be able to join the international English-speaking scientific community and contribute to it, the writer would have to meet the community's expectations for mutual academic interaction.

L2 writing in the Estonian context

The historical and cultural development of the writing conventions in Estonia may be considered to have mostly been influenced by German, Russian and Finnish styles (see, e.g., Laanekask 2004). The academic traditions in Estonia (up to the 1930s) were influenced by German academic traditions which explains certain similarities between Estonian and German textual patterns. In the course of several decades, Estonian academic discourse was affected by Russian (Soviet) academic norms and writing practices. Linguistically, the Estonian language can be compared with Finnish, which also belongs to the Finno-Ugric group of languages.

Recently, Estonian writers have experienced a strong influence of English academic norms, which marks the transition away from the formerly accepted writing system. As Estonian is a non-Indo-European language with fewer than one million speakers in Estonia, and the differences between Estonian and English are quite significant, the need for cross-culturally specified English academic writing research is well recognised. By the same token, there is likely to be a fair amount of truth in Connor's assertion:

A survey of Finnish studies may seem irrelevant to some reader of this book [Connor 1996]. After all, *most languages are spoken by many more people than is Finnish* [italics mine]. The Finnish studies are included primarily because they, like most of the research reviewed in this book, provide contrastive rhetoric with fresh new concepts, methods, and interpretations. Also *they reflect the urgent needs of a small nation to communicate internationally without undue stigmatization for poor linguistic manners* [italics mine]. (Connor 1996: 47)

With such a small population, it is not surprising that although there is a growing interest in Estonia in the teaching and learning of L2 writing, contrastive studies at the discoursal level have deserved insufficient attention so far, and studies on written texts are rare. Laane

(1997) has compared Estonian students' and academics' English written texts with regard to rhetorical and cultural differences. Alas (2005) has investigated assessment of academic writing in terms of L1 subject readers' expectations to overseas students' written texts.

Cross-cultural differences reflect the norms set to writers in different social settings. In the same way, the forms of transmitting knowledge in the Estonian and English languages and cultures vary. In effect, the distinctions between the two cultures' writing norms may partly originate from the different approaches to writing and the traditions of teaching of writing.

Firstly, essay writing in the educational system is much more prevalent in English contexts than in Estonian contexts. For instance, while in the Anglo-American writing culture, an essay is a widely accepted format of assessing writers' mastery both of knowledge and of prose-composition skills, this format is employed in Estonia mostly for testing writers' L1 competence. In other subjects, in contrast, Estonian writers are expected to produce summary-type texts and concentrate on conveying facts rather than developing arguments.

The norms of Estonian essay writing differ from the Anglo-American ones in many respects. For a number of reasons, the Estonian L1 school-writing tradition has favoured the expository essay, the function of which is to explain or acquaint the reader with a body of knowledge (i.e., facts). In this sense, the Estonian writing tradition postulates audience-free style, where *the reader* is responsible for understanding the information adequately. Therefore, the emphasis is on the content of the text and the format is quite loose. In the English cultural tradition, on the other hand, *the writer* has to master the argumentative type of essay, the aim of which is to persuade the specific audience.

The growing need for being accepted in international scientific discourse communities in order to promote their scientific accomplishments has motivated Estonian academics to

increasingly express themselves through the medium of English. Therefore, it seems fair to assume that Estonian academics who are interested in making their research findings internationally accessible are motivated to understand and convey a wider range of social genres and styles than they can do now, and produce good quality pieces of writing in a variety of contexts.

Estonian scientists may encounter the same type of difficulty in the English writing as, for example, their Finnish or German counterparts do, even though the historical development of the cultures has been different. An interesting perspective would be to compare the recent research on the rhetorical aspects of English written discourse by Finnish text analysts (e.g., Connor 1996, Mauranen 1993b, 1996, Ventola 1996) which has revealed some ‘intriguing textual problems’ Finnish scientists have when writing for English-speaking journals (see p. 53). Another perspective for comparison may be the one provided by Lindeberg (1988, quoted in Connor 1996: 51) who claims that “academic writing traditions in Finland have to a great extent been influenced by German academic traditions” (see also p. 53).

The research outlined in the Introduction suggests that L2 writing is not only linguistically, but also rhetorically different from L1 writing. To be able to maintain international academic discourse, Estonian writers would need to have a clear understanding of the nature of the Anglo-American writing system with its conventions and rhetorical patterns. They would also have to know about how and to what extent the English writing system differs from the Estonian writing system. Therefore, the need for cross-culturally specified academic writing research and relevant writing instruction is well recognised. The present research attempts to explore the common problems in the English writing of Estonian students and academics in order to improve English academic writing instruction.

CHAPTER I: THEORETICAL OVERVIEW

There are a number of considerations to take into account in effective L2 text production. First of all, writers need to understand the purpose of writing and know the audience. Besides that, writers should be aware of the different knowledge bases of writing and L2 written discourse production and interpretation strategies. In other words, to participate effectively in English academic written discourse, the writer would need to know what constitutes *text as a product*, including its linguistic, organisational and discursal characteristics, and communicative functions. Another important consideration is to view *text as a process* of how a quality text is produced, received and interpreted by the audience.

Text

According to Lemke (1998: 7), verbal data has social meaningfulness only as texts, not as collections of isolated words or phrases. *Text* can be defined in various ways. Halliday and Hasan (1976) refer to text as a theoretical unit calling it ‘a unit of language in use’, whereas Brown and Yule (1983) consider text a pre-theoretical term for any stretch of language collected or recorded for the purpose of analysis and description referring to it as ‘the verbal record of a communicative event’ (both quoted in Trappes-Lomax 2000:1).

Text can be understood as an instance of spoken or written language that meets certain principles of textual communication – ‘textuality’ (see, e.g., de Beaugrande and Dessler 1981). As a unit of communication text has to adhere to seven ‘constitutive principles of textual communication’ such as *cohesion*, *coherence*, *intentionality*, *acceptability*, *informativity*, *situationality* and *intertextuality*; and three ‘regulative principles of textual communication such as *efficiency*, *effectiveness* and *appropriateness* (ibid.). From the above criteria of textuality, this research highlights the importance of principles such as *cohesion* and *coherence* that both contribute to the *rhetorical organisation* of text. In the

research, the term ‘text’ is used to refer to a longer piece of writing composed for both educational and professional contexts.

Writing can be expressed in various *rhetorical modes* (or *types, forms, domains*) generally referred to as narrative, descriptive, creative, expository and persuasive writing. Those modes of discourse are the traditional methods by which text is developed in a specific context. In this respect, each mode of writing has a specific *purpose* and is written for a specific *audience*. As Hyland (2003: 6) insists, an important principle here is to relate rhetorical structures to meanings as “language forms perform particular functions” which help to achieve the purpose of writing. For example, writing literature reviews falls under the category of creative writing, in which individual style, various interpretations and emotional tone are acceptable. In contrast, writing research articles requires a different discourse mode, aimed at creating and transmitting knowledge with a specific meaning and appeal to the mind.

Written text structure

Research shows that an extended stretch of language exhibits properties which reflect its organisation, coherence, rhetorical force and thematic focus. Writing scholars (e.g., Carter 1993, Grabe and Kaplan 1996, Hoey 1993, White 1999) have referred to a number of descriptive frameworks, which are of particular relevance for the analysis of the *patterned functions* of higher levels of language in written texts. The frameworks include Halliday and Hasan’s *model of cohesion* (Halliday and Hasan 1976), *Gricean maxims* (Grice 1975), Hoey’s *textual macrostructures* (e.g., problem/solution; hypothetical/real; general/particular; and associated lexical patterns), Halliday’s *field, tenor and mode* (Halliday 1989) and Leech’s *politeness principles* (Leech 1983, all quoted in Carter 1993: 100).

According to Grabe and Kaplan (1996: 62), five components comprise the elements of text structure: *syntax and semantics* on a sentential level, *cohesion and coherence* on a textual or intersentential level and *lexicon* as the 'diffuse element' underlying the other four. Besides, in text structure, there are divisions of *surface structure* and *deep structure*. The whole framework can be visually represented as in Figure 3. A more detailed model of text construction is presented in Appendix 2.

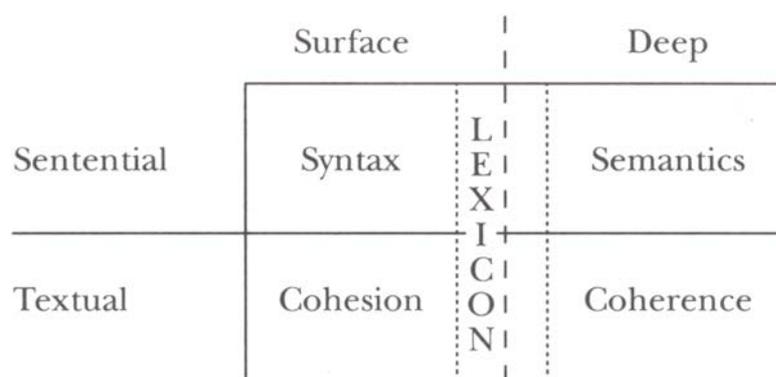


Figure 3. Elements of text structure (Grabe and Kaplan 1996: 62).

One of the possible concepts of text organisation is provided by Trappes-Lomax (2000: 2) who defines two basic structural elements of unity in text: *information structure* and *discourse structure*. The latter denotes *schema-like patterns* of structure called *microstructure*, and *macrostructure*. Microstructure refers to the smallest definable units of a text, whereas macrostructure refers to the overall structure of a text – the main components of the discourse taken as a whole. In order to achieve the unity and coherence of the text, each sentence in a text should be related not only to its preceding and following sentences but also to the whole text.

The characteristic patterns, or even *sub-patterns*, of discourse include the Problem-Solution structure (Hoey 1994), the Claim-Counterclaim structure (McCarthy 1993), the

Hypothetical-Real structure (Winter 1994, all quoted in Hadley 2004: 2-6) and the General-Specific structure (Coulthard 1994). Each of these discourse types has *attitudinal signals*, for example, markers for common ground (*'it has been proved'*), contrast (*'it is not, however'*), claim (*'analysis suggests', 'theory claims'*) and counterclaim (*'proponents stress the fact', 'they point to the fact that'*). In addition, there are rhetorical patterns that are explicitly seen in many texts such as, for instance, *comparison-contrast, cause-effect; relationships of time, process, and cyclical process* (Hamp-Lyons and Heasley 1987). It should be pointed out, however, that various information structures including *classifications, descriptions of processes, definitions and comparisons* usually appear within larger texts rather than forming a basis for a complete text.

The view that “text does permit full structural description” is also represented, for example, by Halliday and Hasan (1985) and Ventola (1987) who focus on structure from the perspective of *genre*. Grabe and Kaplan (1996: 202-203) note that “a text is written within a certain context, aimed at specific readers” and “the writer’s purpose is realized with the structure and lexis used”. The genre structure is created through an overall textual pattern, specific lexical signals, inter-clause relations, and lexical and grammatical cohesive links (Cook 1989, quoted in Cunningham 2004: 4).

Further, Sinclair (1993: 6) asserts that language in use, whether written or spoken, consists in part of features which “organize the *sharing of meaning* [italics mine], as well as features which *create the meaning* [italics mine]”. Until recently, many of the analyses of written texts have been based on forms rather than meanings. Yet, discourse forms have a range of potential meanings, which are narrowed down to specific meanings by the use of specific words, phrases and sentences.

Writers can make the discourse relations of texts either more or less explicit. The underlying schematic pattern of a text can be *implicit*, which is often the case in unambiguous contexts, or can be made *explicit* by lexical signalling:

The relative “weightings” of explicit and implicit knowledge about language may vary according to language mode. Writing, [as opposed to reading] is more likely to permit reflection on a shaping process and on an organization of text/.../. The writing process has a potential for a controlled shaping in and through language, which, particularly at the level of discourse organization, is intimately related to processes of cognitive shaping. (Carter 1993: 103)

Tribble (1996: 34) asserts that “in situations where there is a risk that the reader will not interpret the text in the way the writer wants, it is possible to direct their interpretation by means of explicit lexical signals”.

Cohesion and coherence

Cohesion and *coherence* are two important standards that a text must meet if it is to be regarded as communicative (de Beugrande and Dressler 1981, quoted in Hoey 1991: 11). Although the terms are partly overlapping in meaning, a clear distinction should be made between them (see, e.g., Hoey 1991, Seidlehofer and Widdowson 1999). After the publication of Halliday and Hasan’s book (1976), the notion of *cohesion* was widely accepted as a well-defined and useful category for the analysis of text beyond the sentence. In contrast, *coherence* was regarded as “a vague, fuzzy and rather mystical notion” with little practical value for the analysts (Sinclair 1991: 102). Today, the concepts of cohesion and coherence in writing have been accepted as components of writing research and writing instruction, but there is still some disagreement on what cohesion is, how to create it, how cohesion contributes to readable writing and how it differs from coherence.

Broadly, cohesion and coherence can be achieved by the devices used to order parts of a text, establish causal links, sustain topic continuity, determine relations among discourse entities, and establish bridging between distinct parts of discourse. However, defining coherence in terms of sentence-level connectedness and paragraph unity rather than

discourse unity is too narrow to help writers establish coherence in their written texts. Hoey (1991: 11) agrees that “coherence is not synonymous with cohesion /.../ [yet,] cohesion exists within text and adds to coherence of text”. As cohesion is claimed to contribute to creating the larger organisation of a text, it is important to know how the presence of cohesion contributes to coherence.

The simplest definition of *cohesion* given is that it “refers to relations of meaning that exist within the text, and that define it as a text” (Halliday and Hasan 1976: 4). In other words, cohesion (i.e., *lexical cohesion* and *grammatical cohesion*) is a semantic relation realised through the lexicogrammatical system of the language. Viewed from that perspective, Hoey (1991: 3) defines cohesion “as the way certain words or grammatical features of a sentence can connect that sentence to its predecessors in a text”. Based on Sinclair (1993: 22), grammatical cohesion is clearly structural since it deals only with sentences and clause complexes and “reclassifies a previous sentence by demoting it into an element of the structure of the new sentence”. Lexical cohesion involves the reoccurrence of a word or item and, according to Hoey (1991: 3), it is a “measure of similarity [which] can be assessed by looking at the lexis shared among sentences”.

Cohesion has also been defined as *clause relations* (Winter 1994; Hoey 1994) and *macro patterns* (McCarthy and Carter 1994, quoted in Basturkmen 2002: 1). Tribble (1996: 30) points out that in linking sentences together in a sequence, cohesion is achieved through the use of pronouns and reference words, lexical repetitions and other logical markers. It should be noted, however, that the semantic or lexicogrammatical ties in the sequence of sentences do not always guarantee the coherence of the text:

I bought a Ford. A car in which President Wilson rode down the Champs Elysées was black. Black English has been widely discussed. The discussions between the presidents ended last week. A week has seven days. Every day I feed my cat. Cats have four legs. The cat is on the mat. Mat has three letters. (Brown and Yule 1983: 197, quoted in Shiro 1994: 174)

Writing about cohesion, Halliday and Hasan (1976: 2) mention the concept of *texture*, which distinguishes texts from non-texts. Texture consists of cohesion and two other features of a text: *syntactic redundancy* (i.e., common knowledge) and *semantic redundancy* (i.e., the reader's prior knowledge). Cohesion and redundancy both contribute to coherence in that cohesion comes from the writer's language, whereas redundancy stems from both the writer's language and the reader's world. In effect, the most important thing regarding cohesion seems to be that the reader is oriented properly.

Coherence is a phenomenon which in its complexity is not yet fully understood and is, therefore, still a matter of continuing debate. As stated above, coherence is claimed to contribute to creating a larger organisation of a text. Bublitz, for example, attempts to define the term in the following words:

/.../ coherence is not a state but a process, helped along by a host of interacting factors situated on all levels of communication (from prosodic variation to textual organization, from topic progression to knowledge alignment) /.../we use coherence as a context-dependent, hearer - (or reader-) oriented and comprehension-based, interpretive notion. (Bublitz 1999: 2)

It appears that cohesion is only one component of coherence. In addition to cohesion, at least one other factor must be present for a text to have coherence; that factor is *organisation*. In terms of text unity, Tribble (1996: 33) asserts that "there are also larger structures which are not directly expressed by the sequence of sentences in a text – some underlying principle of ordering which supports coherence". Researchers suggest that the unity of text is achieved by the following organisational factors:

- a. consistency of context of situation (setting, reader, etc.);
 - b. consistency of function (i.e., the text is coherent when it has a purpose and when it has something to communicate);
 - c. consistency of discourse topic;
 - d. consistency of register (e.g., the Hallidayan 'field', 'tenor' and 'mode').
- (Horning 1991: 5)

Furthermore, Östman (1999: 78) modifies the traditional approach to coherence by stressing that coherence can be arrived at through sociocognitive understanding which involves different kinds of pre-existing and easily recognisable patterns. He goes on to

argue that “text conceptualization relies primarily on discourse patterns [which differ between cultures], and then only on genre”. With reference to coherence, Hoey (1983, quoted in Tribble 1996: 33-34) brings in the notion of the *schema* which can be described as “a generally accepted way of organizing ideas which provides a basis for readers’ expectations of how a text will develop”.

Coherence relates to both the written text and *the reader* – understanding the text is highly dependent on what the reader brings to the text. What may be a coherent text for one reader may be an incoherent text for another reader; thus, coherence can be defined as something that the reader establishes in the process of reading connected discourse. In that sense, as Horning (1991) suggests, coherence is both a text-related and a reader-related phenomenon.

Readers expect texts to be coherent and actively search for coherence in difficult texts – a text that consists of a string of isolated sentences without any discourse relationships would not communicate the meaning. Previous studies on reader awareness (see, e.g., Gopen and Swan 1990) have shown that the easiest way to make a text cohere is to employ the ‘*known-new*’ pattern in one’s writing: after a topic has been introduced in one sentence, it will be brought up again in the next. Gopen and Swan declare:

Since we read from left to write we prefer the context on the left, where it can more effectively familiarize the reader. We prefer the new, important information on the right, since its job is to intrigue the reader. (Gopen and Swan 1990: 551)

Thus, the information intended to be emphasised should appear at points of syntactic closure. Another source for coherence, which can help the reader infer the nature of relationship, is the use of sequences typical in English written texts (e.g., hypothetical-real, general- specific, etc.). It is also assumed that the main difficulty with cohesion and coherence is to discover how much is found in the text and how much is in the reader’s mind. Reflecting on written text organisation, Grabe and Kaplan describe coherence in the following terms:

Beyond the surface form, text is organized by the writer's relation to it, to the reader's assumed knowledge, and to the subject matter. Coherence as a theoretical construct in text structure refers to the underlying relations that hold between assertions (or propositions) and how these assertions contribute to the overall discourse theme (or macrostructure). (Grabe and Kaplan 1996: 70)

The interaction between the reader and the writer is known as *metadiscourse*, defined by Vande Kopple (1997: 2) as "discourse that people use not to expand referential material, but to help their readers connect, organize, interpret, evaluate and develop attitudes towards that material." Native English writers use a variety of metadiscoursal devices to guide the reader in the text (see, e.g., Appendix 3). Two types of metadiscourse can be specified. The features of *interpersonal metadiscourse* (e.g., *hedges*, *certainty markers*, *attitude markers*, *commentary*, etc.) "assess the true value of the propositional content and show the author's degree of commitment to the assessment" (Vande Kopple 1985, quoted in Connor 1996: 49). The signals of *textual metadiscourse* reveal the organisation and intertextuality of writing (e.g., *logical connectives*, *sequencers*, etc.) and contribute to the interpretation of the text by the reader (e.g., *code glosses*, *illocution markers*, etc.).

Mauranen (1993) maintains that four metatextual elements contribute to text organisation, namely: *connectors* (e.g., 'however', 'for example'), *reviews* (e.g., 'so far we have assumed'), *previews* (e.g., 'we will show below') and *action markers* (e.g., 'to illustrate this argument'). In addition to that, an important aspect of textual organisation is *visual discourse* (e.g., *first impression*, *external skeleton*, *consistency*, *convention*, etc.) where "the linguistic concept of metadiscourse is expanded from the textual realm to the visual realm" (Kumpf 2000: 1). Visual discourse "confirms the concept of metadiscourse as defined for the text" and improves the cohesion of writing (ibid.: 24).

Knowledge bases of writing

Writing scholars (see, e.g., Tribble 1996, White 1999) have specified four types of knowledge that writers need in effective written discourse such as *content*, *context*

language system and *writing process* knowledge. Grabe and Kaplan suggest that writing is based on seven types of knowledge which are important to focus on in contrastive rhetoric:

1. Knowledge of rhetorical patterns and the relative frequency of various patterns (e.g., exposition/argument, classification, definition, etc);
2. Knowledge of composing conventions and strategies needed to generate a text (e.g., pre-writing, data collection, revision);
3. Knowledge of the morphosyntax of the target language, particularly as it applies at the intersentential level;
4. Knowledge of the coherence-creating mechanisms of the target language;
5. Knowledge of the writing conventions of the target language in the sense both of frequency and distribution of text types and text appearance (e.g., letter, essay, report);
6. Knowledge of the audience characteristics and expectations in the target culture;
7. Knowledge of the subject to be discussed, including both 'what everyone knows' in the target culture and specialist knowledge.

(Grabe and Kaplan 1996: 200)

The taxonomy of academic writing, introduced by Grabe and Kaplan, attempts to structure the writing situation and skills, knowledge bases, and processes. This taxonomy, though not considered to be conclusive, describes [academic] *discourse knowledge* as:

- A. Knowledge of intrasentential and intersentential marking devices (cohesion, syntactic parallelism);
- B. Knowledge of informational structuring (topic/comment, given/new, theme/rheme, adjacency pairs);
- C. Knowledge of semantic relations across clauses;
- D. Knowledge to recognize main topics;
- E. Knowledge of genre structure and genre constraints;
- F. Knowledge of organizing schemes (top-level discourse structure);
- G. Knowledge of inferencing (bridging, elaborating);
- H. Awareness of differences in features of discourse structuring across languages and cultures;
- I. Awareness of different proficiency levels of discourse skills in different languages.

(Grabe and Kaplan 1996: 221-222)

In short, the discourse interpretation strategies that writers employ to produce a text include principles of pragmatics, propositional analysis, discourse coherence and cohesion, lexical choice, information management, syntactic structure, rhetorical organisation, and the types of discourse strategies used to advance a position, build an argument and refute an argument. Combining all the above aspects, Prideaux has attempted to describe the nature of written discourse in the following statement:

/.../ extensive research into the structure of discourse reveals that the interpretation of any particular text is governed by a variety of syntactic, semantic, and pragmatic factors, that a meaning representation is much more than just the literal meanings of the words and the sentences, that both explicit and implicit information are used, that bridging assumptions are constructed, that pragmatic knowledge is exploited, that a variety of rhetorical strategies are employed, and that participants' attitudes colour interpretations. (Prideaux 1997: 3-4)

Indeed, although equally relevant in all forms of writing, knowledge of all the situational parameters of the target language system of writing is of particular importance in academic discourse:

./.../ if writers know what to write in a given context, what the reader expects the text to look like in a given context, and which parts of the language system are relevant to the particular task in hand, and have a command of writing skills appropriate to this task, then they have a good chance of writing something that will be effective. (Tribble 1996: 68)

Figure 4 represents the way in which, for any writing task, the knowledge bases of writing interrelate. In other words, effective writers draw on a bank of knowledge bases such as

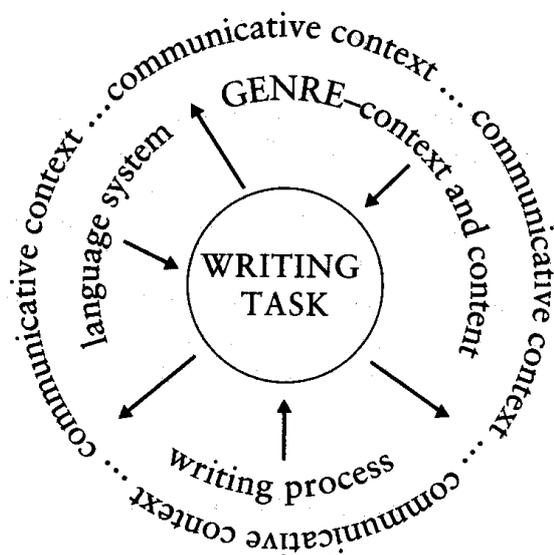


Figure 4. *Knowledge bases of effective writing (Tribble 1996: 68).*

knowledge of the genre, knowledge of the language system and knowledge of the writing process.

Writing in academic settings

The Greek word ‘academia’ generally refers to the whole of higher education and research comprising the development and transmission of large amounts of knowledge across generations. In view of this, academic writing is widely recognised not only as an important skill of conveying information but also transforming information to create new

information. As the writing process and the research activity appear to be co-extensive, mastering effective writing skills is a key consideration in the academic world.

Writing scholars have coined a variety of definitions for the notions of *academic writing*, *scientific writing*, *engineering writing* and *technical writing* which all, partly overlapping in meaning, differ in certain aspects. In general, the description of academic disciplines would depict science and humanities at the opposite ends of the continuum, and social sciences in the middle of it. In this paper, the term ‘scientific writing’ is used to refer to the written discourse conducted in the specific fields of engineering and science.

Although the Anglo-American English tradition treats academic writing against the background of the general theory of writing, it strongly emphasises the *interactive/communicative* nature of the writing process as outlined in Appendix 1. Increasingly so, writing is seen as interaction within a particular discourse community that “involves more than the generation, translation and organization of ideas” (Connor 1996: 18). White (1997) maintains that the preference given to *argumentation* and *style* is one of the characteristic features of writing within professional discourse systems. In White’s words (1997: 11), academic writing can be taken as a “sub-system of the utilitarian discourse system”. Scollon and Scollon (1995, quoted in White, *ibid.*) describe the six characteristics of the utilitarian discourse system as follows: *anti-rhetorical*, *positive-empirical*, *deductive*, *individualistic*, *egalitarian* and *public* (or *institutionally sanctioned*). Further, White (1995: 2) believes that the attributes of *clarity*, *brevity* and *commitment* show “the extent to which the writer is prepared to be accountable for the claims they make and the propositions they put forward”. In some respect, the ability to write indicates the ability to function as a literate member of a particular discourse community, and the ability to write well has a very close relationship to academic and professional success.

The earliest analysis of academic discourse in English was conducted in the 1960s with the focus on the quantitative study of formal registers (e.g., Barber 1962, Halliday, McIntosh and Strevens 1964, quoted in Flowerdew 2002: 2). Barber identified a number of formal linguistic features which distinguish academic writing from other types of writing:

.../ long sentence length /.../; many complex noun and adjective phrases; many non-finite subordinate phrases and clauses; many infinite clauses; many occurrences of the verb BE /.../; many conditional structures; a relatively greater number of passive structures; a relatively greater number of relative clauses; a relatively greater proportion of simple present tense verbs; a relatively greater number of past participles; a smaller number of progressive tense forms; a smaller number of past tense forms; few questions; and few contractions. (Barber 1962, quoted in Grabe and Kaplan 1996: 159)

Later research has added some linguistic features such as a greater number of lexical repetitions, few pronouns, a greater number of prepositional phrases, and explained in what circumstances those features would most likely appear in academic contexts.

In the 1970s, the study of texts shifted from formal aspects of writing to the organisation of overall discourse. What followed was, in the words of Swales (1990: 3), a “deeper and narrower” approach, which focused on specific academic genres and attempted to investigate not only formal features but also communicative purposes of written texts. Since then, the work in academic genre analysis (e.g., Bhatia 1993, Dudley-Evans 1994, Hoey 1983, Hyland 1995, Swales 1990, Tribble 1996) has been of highly applied nature focusing on typical patterns of linguistic realisation (e.g., the ‘move’ structure by Swales). In North America, the New Rhetoric school (e.g., Freedman and Medway 1994, quoted in Flowerdew 2002: 2) has been influential emphasising *contextual* (e.g., awareness raising) rather than *linguistic* aspects of academic genres.

A considerable amount of research in academic written discourse has been conducted in the last decades by Raimes (1991), Leki and Carson (1994), Coulthard (1994), and others. A significant scholarly activity has been carried out also in the fields of writing in L2 (Hyland 2003, Kroll 1990, Leki 1992, Raimes 1985, Silva 1993), contrastive rhetoric (Connor 1996, Hinds 1987, Kaplan 1966, Mauranen 1993a, 1993b, Ventola 1996), corpus

linguistics (Flowerdew 1998, Johns 1988, Lee 2001, Tribble 1990, 1991) and ethnography (Candlin and Plum 1999, Flowerdew and Miller 1996, quoted in Flowerdew 2002: 4).

The context of academic written discourse

On the question of what makes up the context of academic writing and how this context and the language use it generates can best be described, Tribble (1996: 84) draws attention to the two contrasting views. First, *the intellectual/rhetorical approach* relates language system knowledge to context knowledge, and favours the modes of classical rhetoric assuming that all academic discourse has a common intellectual framework. *The social/genre approach*, in its turn, advocates the concept of a discourse community, which Swales (1990: 29) has characterised in the categories of *common goals, participatory mechanisms, information exchange, community specific genres, a highly specialised terminology and a high general level of expertise*.

Reflecting on the notions of genre and rhetoric, Mauranen (1993b: 2) maintains that universal aspects of academic writing tend to be conditioned by *genre*, while variable aspects fall under the category of *rhetoric*. According to her, genre is a *social activity* of a specific discourse community realised in language. In the same way, generic constraints on scientific articles, for example, reflect social rather than linguistic regulations set by the community on its members.

While genre is a social activity of a discourse community realised in language, rhetoric in academic writing is understood as persuasive discourse, which involves the strategies that writers use to convince the audience of their claims. Swales attempts to describe the rhetorical nature of academic discourse in the following terms:

.../ all of us, as academic writers and whatever our backgrounds, are engaged with thinking about our readers' likely expectations and reactions, with deciding on what to say – about our data, and with organizing our texts in ways that meet local conventions and yet create a space for ourselves. (Swales 1990: 5)

However, there appears to be some controversy in the scholars' views on academic discourse. For instance, Raimes (1991: 417) doubts whether there is a fixed and stable construct of academic writing even in one discipline and whether there is such a notion as 'academic discourse' to teach and to learn. In agreement with Raimes, Widdowson offers a more universalist hypothesis of transnational discourse communities void of any linguistic barriers:

Scientific exposition is structured according to certain patterns of rhetorical organization which, with some tolerance for individual stylistic variation, imposes conformity on members of the scientific community no matter what language they happen to use. (Widdowson 1979: 61, quoted in Swales 1990: 65)

The social/genre approach exploits *structure and organisation, argumentation, and style* as the three most important aspects of academic writing. In academic written discourse, the writer provides the text with a more formal and coherent structure, through the use of various linguistic, stylistic and rhetorical devices. The reader of the text faces the task of constructing an interpretation from that text. An important aspect of such interpretation is the fact that the author guides the reader by means of writing strategies and structures to convey far more information than is explicitly given in the text. It might be concluded that understanding a written text is a matter of interpretation that depends as much on what the reader brings to the text as what the author puts into it. Therefore, when undertaking a specific task, besides content knowledge and linguistic knowledge, a writer would need to have also context knowledge in which the text will be read (see also Figure 4, p. 35 above).

Argumentation and style in academic prose

The aim of academic prose lies in expressing a point of view on a subject by means of a well-formulated argument and effectively presented evidence. In this sense, academic writing can be considered a skill to communicate the investigated knowledge to a critical and informed audience. In academic discourse, it is anticipated that the writer will adhere

to certain argumentation criteria and apply appropriate reasoning strategies. In principle, such writing is a rhetorical activity, where, as Myers (1985: 220) states, “every sentence is charged with rhetorical significance” and “the writer with the most appealing argument – often triumphs”. Drawing on the previous research in the field, Grabe and Kaplan (1996: 169) refer to the social co-construction of science which “requires salesmanship” as an essential characteristic of academic writing.

Considering the main principles and practices of Anglo-American argumentative writing traditions, Isaksson-Wikberg (1999: 61-65) focuses on three theoretical approaches. First, the traditional and logic-based approach views argument as a way to demonstrate an already existing truth by means of *induction* (generalising from evidence), and *deduction* (reasoning from general principles to a specific case) avoiding *logical fallacies*. Second, the rhetorical approach to argumentation sees it as a rhetorical activity aiming at creating and establishing knowledge (Higgins 1992: 4, quoted in Isaksson-Wikberg 1999: 68). Third, Toulmin’s (1958: 6, quoted in White 1995: 18) analytical model based on informal logic presents a scheme for analysing and evaluating arguments following six elements: *claim, data, warrant, backing, qualifier, rebuttal*. It is clear that the demerit of this model is that it ignores the role of the audience. Based on Toulmin’s (1958, 1979) analysis of reasoning found in academic writing, Connor (1991: 218, quoted in White 1995: 19) defines three major elements of argument as *claims*, which refer to assertions put forward publicly for general acceptance; *data*, which denote support for the claim in the form of experience, facts and statistics; and *warrants*, which refer to bridges from data to claim including rules, principles and inference-licences.

In the academia, writers would need to master the skills of voicing their claims and hedging their claims the most; therefore, the major aspects of style, highly significant for effective writers are *formality* and *hedging*. These stylistic features of text, apart from

increasing text readability, also establish the writer/reader relationship of *authority*. The issues that Tribble (1996: 95-102) has addressed in terms of this relationship involve the potential reader of the text, the effect the writer wants to achieve, and the power relationships that exist between the addresser and the addressee of the text.

Another important consideration in academic written discourse is concerned with achieving and maintaining balance between *efficiency* and *politeness*. In terms of cross-culturally different rhetorical and stylistic preferences, Mauranen points out an interesting fact:

Finnish and Anglo-American preferences for rhetorical strategies seem to reflect very different notions of politeness /.../ It is likely that the typical strategy in each culture is perceived as the positive, polite one and the untypical as the negative, impolite one. (Mauranen 1993b: 16)

“In order to preserve at least the semblance of harmony and cohesion”, White emphasises the need to master both deductive and inductive strategies in intercultural communication, based on Lakoff’s (1973) politeness principles of *solidarity politeness* and *deference politeness* respectively:

A deductive strategy is considered to be better, when the readership do not wish to assert their independence from the writer... [it] is based on solidarity politeness, which emphasizes the common grounds shared by participants in a discourse. An inductive strategy is more effective when writers wish to show that they do not automatically assume that the reader will agree with their position. (White 1995: 1)

As regards the relationship between rhetorical strategies and forms of discourse, White (1997: 14) quotes two sets of principles involving the Co-operative Principle (Grice 1975) and Politeness Principles (Lakoff 1973). As far as efficiency is concerned, White (1999: 16) adapts Gricean maxims to academic writing applying the keywords “quality, quantity, relation and manner”, whereas Hamp-Lyons and Heasley (1987: 105) refer to these notions as “co-operative principles of honesty, reality, relevance and clarity” respectively. The first principle (i.e., quality/honesty) means that the writer is supposed to give adequate evidence. The second principle (i.e., quantity/reality) indicates that the writer is expected to provide neither less nor more information than is required for the meaningful

interaction. The third principle (i.e., relation/relevance) postulates that the writer is expected to give only relevant data and the fourth principle (i.e., manner/clarity) advocates clarity. Based on the Gricean maxims, Perelman (1998: 78) has outlined the qualities of effective style such as *accuracy, clarity, conciseness, coherence, appropriateness* (determined by the audience and the specific institutional context) and *conformity* (to the conventions of genre and discourse community). The ways for avoiding responsibility or showing tact in a written text are *hedging, being conventionally indirect, impersonalising and passivising*; however, White (1995) contends that the overly use of these features and the misuse of the Co-operative Principle can result in discourse, “which /.../ contains redundancies, ambiguities and obscurities”.

It is certainly true that to be able to participate effectively in academic discourse, a writer should have a particular body of knowledge, be recognised as a member of the community and be aware of the writing conventions of the academic discipline. In fact, any activity of writing can be characterised by a range of conventions – those applying to a relatively simple matter of layout and specific ways of organising thought, formulating intention and expressing a reader/writer relationship (Tribble 1996: 35). In this respect, a number of researchers (see, e.g., Johns 1997, quoted in Hyland 2001: 9) have attempted to identify the core features of expository academic prose such as “*explicitness, intertextuality, objectivity, emotional neutrality, correct social relations, appropriate genre requirements, use of metadiscourse and hedging and display of a disciplinary vision*”. In addition, the style of the special subject and the conventions of the scientific field are important to consider when reporting research. For the above reasons, the specialised language of the field is readily understood by expert writers, though not always by outsiders and novice academic writers (see p. 47). Therefore, to be able to produce reader-

friendly prose and maintain academic communication, the writer should recognise and employ a combination of qualities of effective style.

Academic writing conventions and genres

According to Swales (1990), community membership lies in the ability to use *genres* appropriately. Wennerstrom (2003: 10) agrees that for effective writing it is important for the writer to become familiar with “the genres of discourse, their conventional structure, and the norms for how and by whom they are used in the context of the surrounding community”. In the academia, writing and publishing is conducted in various genres such as the dissertation, the thesis, the conference paper, the research article, the abstract, the annotated bibliography, the scientific report and the laboratory report.

Academic writers (both L1 and L2) are expected to master fairly traditional forms of writing. In developing texts, writers should modify the form of discourse according to the purpose of writing and the specific audience. Writers face a variety of writing tasks as they work towards entering the discourse community, whereas the genres become progressively more complex and demanding the farther they go in the field. Clearly, writing a quality text requires understanding of the audience’s expectations about the genre.

In principle, the modes of writing most prevalent in academic prose are *argumentation* and *exposition*, although in most texts, the rhetorical structures are mixed in certain combinations characteristic of the genre. In science and technology, for instance, the dominant writing functions are defining objects, describing processes and charts, whereas in the humanities, the standard writing modes are analysing and synthesising multiple sources (see, e.g., Hyland 2001: 12). Responding to the specific academic context, writers employ a variety of writing strategies/styles and rhetorical structures such as *process*, *description*, *division*, *classification*, *chronology*, *summary*, *comparison*, *description*, *cause and effect*, *comparison and contrast*, *deductive and inductive reasoning*, and some others.

These common principles of academic writing cannot, however, refer to uniform disciplinary practices since they are developed differently within each specific discipline. As illustrated in Figure 5, each discipline in the academia has slightly different requirements to provide evidence in that field, a different system for examining experience and a different kind of thinking.

Expanding on the role of discipline-specific genre conventions, Spack suggests the following:

/.../ for each discipline, writing may involve examining the kinds of issues a discipline considers important, why certain methods of enquiry and not others are sanctioned, how the conventions a discipline shape the text in that discipline, how individual writers represent themselves in a text, how texts are read and disseminated within the discipline, and how one text influences other texts. (Spack 1988: 38)

Especially at the higher level of subject expertise, clear differences exist among texts typical of, for instance, engineering, the social sciences, the natural sciences, the life

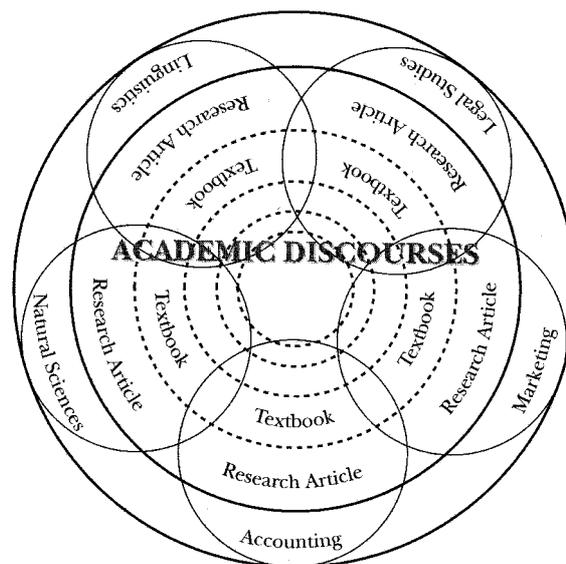


Figure 5. *Variation in academic discourse (Bhatia 2002:34).*

sciences, the humanities and mathematics. This notion is further elaborated by Čmejrková who, discussing the awareness of English writing norms in discipline-specific writing cultures, suggests:

/.../ [the awareness] seems to be much higher in the hard sciences which work in more direct contact with English academic production than in the humanities, such as linguistics, literary theory, aesthetics,

philosophy, etc. These disciplines show a greater deal of what is called ‘memory of science’, and the cultural milieu which surrounds these disciplines seems to show a stronger resistance. (Čmejrková 1996: 146)

In addition, within each discipline, there are sub-disciplines, each with its own set of conventions and constraints:

To further complicate matters, no discipline is static. In virtually all academic disciplines there is controversy concerning the validity of approaches. In addition, the principles of reasoning in a discipline may change over time, even in science, which is affected by the emergence of new mathematical techniques, new items of apparatus, and even new philosophical precepts. Formal scientific papers, then, through often considered final statements of facts, are primarily contributions to scientific debate” (Spack 1988: 39)

In this respect, research holds that the writing differences in discourse communities may be the result of various ways of thinking, which are, in turn, shaped by cultural phenomena including educational, rhetorical, political and philosophical systems. In scientific discourse, for example, writers are expected to make decisions about what knowledge can be defined as science: “what may be observed, how it can be reported, what is considered evidence, how evidence is arranged, and how scholarly argument is conducted so that it becomes acceptable to the scientific community” (Grabe and Kaplan 1996: 163). With regard to that, Hyland (2003) maintains that in order to understand how the genres of scientific writing are produced, it is necessary to consider all the layers of text organisation – *the surface structure level, the rhetorical level and the level of (scientific) assumption*. In the same way, differences among various genres are manifested through the functional and organisational logic of the text, and the appropriate rhetorical features.

It should be noted that different genres or text-types may have the same internal rhetorical structure and grammatical structure, but the genres may also easily shift the rhetorical strategy posing a problem especially to novice academic writers who are not familiar with the genre conventions yet. In shaping and conveying the message to the audience, the rhetorical level of the text has a dominant role over the surface structure level of the text. A different type of rhetoric is required in order to achieve the acceptability of

the ideas and to establish new criteria for evaluating research. For instance, even though the dissemination mode of a research paper is formal with its passive forms and impersonal style, its underlying intent is, through logical argument and adequate rhetorical choices, to serve a larger peer audience.

Research by Selinker and Douglas (1989, quoted in Wennerstrom 2003: 37) has investigated the individual style of writers in different discourse communities (see p. 19). At the *macro level*, these domains are likely to involve conventional patterns as, for example, writing about one's research requires knowledge of academic conventions of argument structure, exemplification strategies, and similar others. At the *micro level*, on the other hand, certain lexicogrammatical structures may occur more frequently in one discourse domain than in another. In practice, members of a scientific speech community develop "schemata – sets of expectations based on repeated experiences – for the rhetorical patterns of written genres" (Wennerstrom 2003: 9). As the reader will be anticipating certain conventions regarding organisation, the writer is supposed to have clear expectations of the relationship which words have within sentences and sentences have in sequences, and knowledge of how information is organised in the community. Fine (1988: 13) suggests that such knowledge of rhetorical conventions facilitates cognitive processing in that "as the readers [proceed], they are able to locate key elements and predict what the structure will be". Bhatia outlines four pre-requisites for successful handling of specialist discourse and developing of communicative expertise:

1. understanding of the specialist code;
2. acquisition of genre knowledge (including the rhetorical forms and content);
3. sensitivity of cognitive structuring of specialist genres;
4. proficiency in the manipulation of specialist genres.

(Bhatia 1997: 2)

Even though in most cases the written production of academic writers circulates within the discourse community, texts can also be created for other audiences with the aim of disseminating knowledge outside the academy (e.g., an expert written opinion). In

contrast, although not every piece of writing produced in the academy can be universally accepted as academic, Spack (1988: 32), for example, believes that even a personal essay can be considered academic in a number of fields (e.g., linguistics, medicine, etc.) when “it serves as a vehicle for academic reflection and self-expression”. Finally, as Tribble (1996: 51) claims “a genre is not a rigid set of rules for text formation /.../ it is a social practice /.../ [which is] open to challenge and change”.

The novice-expert continuum of writers

The ‘novice-expert continuum’, proposed by Mc Donald (1994, quoted in Leydens and Olds 2000: 2), specifies four different types of writing the members of the academia may be involved in, namely: *non-academic writing*, *general academic writing*, *novice approximation of disciplinary writing*, *expert/insider writing*. Apart from that, each academic environment is likely to be represented not only by L1 academic writers but also by L2 academic writers producing texts for international discourse communities. In this respect, the communicative context of writing (e.g., L1 or L2) and the writers’ experience in writing (novice/expert) may influence the quality of writers’ production and its acceptance by the target audience.

Academic literacy indicates fluency in particular ways of thinking and writing specific to the academic context. However, not all academic writers proceed to research and need to produce expert writing. Tertiary-level students as novice academic writers are mostly engaged with *general academic writing* thorough which they are expected to demonstrate their L1 academic literacy. This is the transition stage from school literacy practices to the ones that are specific to expert academic practices.

As writers progress in their studies, many of them may proceed to the next stage in the academic literacy. In that process, writers adopt a basic set of disciplinary discourse conventions that the academy requires of them and L1 the research paper becomes an

important genre for expressing field-specific knowledge. *Expert academic writing* is the ultimate stage of academic literacy which involves the ability to communicate knowledge in ways that reflect the disciplinary specific conventions and scholarly standards.

In the words of Spack (1988: 38), *expert writers* in the field have spent years acquiring the knowledge and understanding that enable them to recognise the issues that “dominate discussion in the field (e.g., communicative competence), the methods of inquiry employed (e.g., ethnography), the structure of manuscripts focusing on those issues (e.g., TESOL Quarterly format)”, and the terms associated with various issues. *Novice writers*, on the other hand, are confronted with difficulties in relation to various kinds of genre conventions and specific field expectations, for example, of how to logically develop an argument, how to support a claim with evidence, what counts as a proof in a specific field and how to present scientific data.

What this complex process means is that academic writers are engaged in “a two-way interaction between continuously developing knowledge and continuously developing text” (Bereiter and Scardamalia 1987: 12, quoted in Myles 2002: 1). In practice, as Weigle (2002: 23) notes, “at least in the English speaking world one of the main functions of writing at higher levels of education is to expand one’s own knowledge through *reflection* [italics mine] rather than simply to communicate information”. Thus, according to Warschauer (2002: 1), while attempting to ‘network’ into academic discourse, writers are facing two options: whether to write as a matter of mastering forms or to consider writing as a developmental process – “both as an individual and as a member of the community”.

According to Grabe and Kaplan (1996: 340), expert academic writers are often concerned with “analysing and interpreting information critically, synthesizing disparate sets of information, creating information, arguing alternative perspectives, and presenting and promoting research”. However, even though writers may be proficient in their

scientific field and native language, they may not be as successful in English written discourse. Although this may be attributable to their insufficient L2 linguistic proficiency, another explanation may be that in the choice of rhetorical strategies, writers are constrained by their inadequate knowledge of the norms of the target scientific community as well as the writing conventions of their national culture.

Cross-cultural considerations of Anglo-American academic writing

Based on the argument above, it can be assumed that while certain features of academic discourse are *genre-driven*, others appear to be *culture-driven*. Similarly, the forms of transmitting knowledge in academic settings vary not only across disciplines, but also across languages and cultures. For instance, although academic papers are considered to be relatively uniform due to the genre requirements, there is a “significant intercultural variation in the rhetorical preference of writers” (Mauranen 1993b: 1). In the Anglo-American writing tradition, writers are supposed to follow specific cultural schemata with regard to texts, knowledge and the writer/reader relationship. Written texts are expected to display fixed organisational patterns and rhetorical qualities; and writers are expected to communicate their knowledge and voice their opinions. This would mean that in L1 settings, learning to write academically involves learning a specialised version of a language already known to writers. In L2 settings, on the other hand, the acquisition and development of academic literacy skills require conscious effort as the writers are also faced with social and cognitive challenges related to target language competence:

Acquisition of academic vocabulary and discourse style is particularly difficult. According to cognitive theory, communicating orally or in writing is an active process of skill development and gradual elimination of errors as the learner internalizes the language. Indeed, acquisition is a product of the complex interaction of the linguistic environment and the learner's internal mechanisms. With practice, there is continual restructuring as learners shift these internal representations in order to achieve increasing degrees of mastery in L2. (McLaughlin 1988, quoted in Myles 2002:18)

Furthermore, as Connor (1996) points out, writing conventions do not transfer easily across cultures and may, therefore, interfere with L2 writing. Clearly, it cannot be denied that

native speakers are linguistically privileged in the competition to publish their research results in English, even though writing up research is not a natural ability native writers inherently have.

Indeed, previous research indicates that, in contrast with texts written by native English speakers, L2 written texts are less effective, less cohesive, less fluent (Silva 1997) and contain more errors (Purves 1988, quoted in Hyland 2003). Examining the expertise in writing, Beaufort (1999: 3) refers to seven key problems that might distort written communication including “unclear purpose, unfocused writing, poor organisation, difficult language, excess verbiage, improper or ineffective choice of words and grammatical errors that mislead readers”.

As noted earlier in this Chapter, the basic considerations in the Anglo-American tradition of academic writing are text organisation, argumentation and style, all of which serve the main *purpose* of writing and help to fulfil the expectations of the *audience*. Research (e.g., Connor 1996, Silva 1993) has established that *whole text organisation* is the area, which can create most problems for L2 writers in academic contexts since writers from different cultures prefer certain forms of textual structure to other forms. In scientific writing, *poor design of text* is reported to be one of the most common reasons given by journal editors for the rejection of research articles. As Mahrer (1999: 1) declares “many unsuccessful authors write weak or insufficient manuscripts because they fail to include what readers need from a manuscript, not because of poor science”. In other words, English argumentative writing implies a system of parameters that L2 academic writers have to adopt in order to defend a position and fulfil the purpose of writing in discourse communities. The explicit features of Anglo-American text structure and argumentation can be characterised in the following words:

This style emphasizes the use of a thesis statement and topic sentences. Specificity is highly valued, along with interpretive clarity and the use of concrete, clearly delineated supporting examples. The

writing's purpose is primarily focused upon identifying the individualistic point of view and the carefully reasoned logic that validates it. (Condon 2004: 1)

The main purpose of academic writing is not only to convey information but also to influence the reader in a meaningful way. Consequently, non-native writers who are not able to define the *scientific problem* and apply *logical argumentation* strategies to reach the *solution*, fail to convey the meaning to the international audience. For this reason, the *style* of the special subject and the conventions of the scientific field are important to consider when reporting research. James (1984) differentiates between three types of mistakes in style: the mistakes which frequently lead to a breakdown in meaning, the mistakes which frequently lead to a blurring of the meaning and the mistakes which distract the reader from the meaning conveyed. With respect to the above arguments, Connor (1996: 91) has listed three major categories of difficulty which have emerged from contrastive text linguistic studies of L2 student writing: *paragraph development, discourse development and metadiscourse*.

The cross-cultural issues of the Estonian academic writing style

The assumption is that among the issues that may hinder Estonian writers to produce texts of high quality might be a number of those that are universally characteristic of L2 writers. Consequently, the first stage in acquiring an effective and readable L2 writing style is to understand the factors that contribute to incoherent writing. The present research attempts to provide a contrastive overview of the textual aspects of writing in Estonian L2 writers' practices in comparison with what is expected in the Anglo-American academic writing style. Drawing on a number of comparative studies on L2 writing (Clyne 1991, Connor 1984, Mauranen 1996, Perelman, et al. 1998, Silva 1993), this research focuses on the possible areas of difficulty L2 writers have in producing readable prose and the distinct features common to most L2 writers as follows:

1. Text organisation: different organisational preferences such as

- a looser segmental (the introduction, the discussion, the conclusion) structure;
 - less paragraphing or no paragraphing at all;
 - less explicit formal closure;
 - less rhetorical connectedness (e.g., less linking of the concluding statements to the preceding subtopics of the problem);
 - less variety and more errors in the use of conjunctive elements (e.g., different uses of cohesion markers, in particular markers which are less facilitative and create weaker lexical ties, etc.);
2. Argumentation: different approaches to argument structuring such as
- less adequate support for claim;
 - less effective linking of the arguments;
 - more mixed arguments (arguing for both 'for and against'; or mostly for 'for');
 - more argument alternations;
 - more argument digression (e.g., the argument ended in a different direction than it began);
3. Style: different stylistic preferences such as
- deficient structures (e.g., overloaded and over-complex sentences; sentence fragments; choppy sentences; interrupted sentences; comma splices, etc.);
 - less tentative and more personal style;
 - wordiness (e.g., unnecessary words and redundant phrases; unnecessary repetition, overnominalisation; overpassivisation, etc.);
 - misplacement of information (e.g., in structures such as given/new; general/specific, etc.);
 - register-mixing (i.e., inconsistency of diction and tone);
 - less metadiscourse (e.g., less use of interpersonal and textual devices.)
4. Audience awareness: different perspectives on reader orientation
- less audience awareness (e.g., attention getting devices, estimates of reader knowledge, etc.).

(Adapted from Clyne 1991, Connor 1996, Mauranen 1996, Perelman, et al. 1998, Silva 1993)

As already mentioned, due to the similar linguistic background, Estonian writers may encounter the same type of difficulty in L2 academic writing as their Finnish peers do. The findings (see, e.g., Connor 1996, Mauranen 1993b, Ventola 1996) suggest that in comparison with the Anglo-American writers, Finnish writers are less successful in organising the text and orientating the reader since they show inefficient textual rhetoric (e.g., poor text organisation, inductive style of writing, negative politeness, implicit rather than explicit rhetoric, etc.) in their written products. Connor (1996: 50), for instance, has urged writers to correct text features related to “theme-rheme, connector and other global features”. In particular, she found that Finnish writers used too few connectors, did not handle thematic variation well, and had problems with the use of pronouns and articles as reference.

The fact that there are certain similarities between Estonian and German textual patterns suggests that when writing in English, Estonian writers may encounter similar problems as German writers have. In the contrastive studies of German and English rhetoric, researchers have found evidence for differences in written texts “in terms of textual symmetry, text hierarchy, argument continuity, data integration, definition giving, use of advance organizers, and hedging and modal verb use” (Kaplan and Grabe 1996: 188). Clyne compared English and German essay writing and found cultural differences in the organisation of written discourse in several areas:

- Form orientation versus content orientation;
- Linearity versus digressiveness;
- Continuity in argumentation;
- Use of advance organisers;
- Abstractness versus concreteness of the content;
- Writer responsibility versus reader responsibility;
- Textual symmetry;
- Data integration;
- Content structure.

(Adapted from Clyne 1991)

Based on the assumption that Estonian and German writers may have a similar writing style, Estonian writers can be said to write *inductively* when compared to native English speakers, who write *deductively*. German writers are reported to employ the strategy of introducing key elements relatively late in the text which, according to Connor (1996: 50), may result “in the feeling of vagueness and indirectness in a native English reader”.

It appears that *form* is of greater significance in Anglo-American writing than in German-speaking cultures, where content seems to be dominant. As Clyne (ibid.) suggests, however, a key difference lies in the *organisation* and *style* of writing. While the English written discourse favours *linear structure* and a certain development of superstructures in the text, the German writing style favours *interruptions* and *digression*. In English, the role of *diction* and *tone* is considered to be important in maintaining the learned style of writing, whereas in German, the use of complex *syntactic structures* is considered a hallmark of academic prose.

As the English writing convention emphasises form and postulates that texts are linear and have advance organisers to facilitate reading, the main thesis of the text is presented early, precisely and clearly. In this aspect, Čmejrková (1996: 144) implies that English academic texts are simple, plain and precise to the extent that “[they] are said to be closer to non-academic ones”. The Estonian writing convention, on the other hand, seems to emphasise *content* over form as it favours *digression*, *textual asymmetry* and *discontinuity of argument*. In such a text, the writer’s emphasis is on providing the reader with knowledge and theory rather than facilitating reading. In this respect, Estonian academic writing may be characterised by a large number of nominalisations, agentless passives, impersonal constructions, and overloaded phrases (see also Laane 1997). Another typical feature of the Estonian academic style is that it tolerates multiple standpoints, the delayed purpose and vagueness. The explanation for that is simple – throughout history, Estonians

have been trained to read between the lines and find the implicit meanings hidden in the text.

In academic writing, *readers* and *writers* seem to have a broadly similar motivation and their interest in the text is constant since they are engaged in written discourse for professional purposes. With regard to that, Clyne (1987) asserts that the cross-cultural differences between languages reveal different attitudes about the *communicative aspect* – the readability of texts. A prominent feature, reflected in the Anglo-American tradition of writing, is the writer’s role in making the text understandable to the reader:

Native speakers of English expect writing to be hierarchically organized, with explicit connections between ideas and direct statements, and with original content. (Leki 1992, quoted in Weigle 1996:21)

The underlying concept of reader expectation is most immediately evident at the level of largest units of discourse. English academic writers show the reader the formal structure of the text, clearly indicating the divisions and sections such as *introduction*, *purpose*, *method*, *results*, *discussion* and *conclusion*. This type of patterning is less likely to appear in Estonian academic writing, where the macrostructure of the texts is exposed by internal theme development rather than external factors.

Following Hind’s (1987, quoted in Čmejrková 1996: 144) classification, Estonian can be considered a *reader-responsible language* compared to English which is a *writer-responsible language*. The intriguing issue is that some text linguists (e.g., Mauranen 1993b, Čmejrková 1996, Ventola 1991) consider reader-responsibility an asset rather than a demerit. However, Weigle (2002: 22) claims that frequently an English speaking reader “is apt to find the writing difficult to read, poorly organized, or excessively vague” if the L2 writer comes from a reader-responsible culture. In this regard, Hayes (1996, quoted in Weigle, *ibid.*) suggests that “readers form a representation, not just of the text itself, but of the writer’s persona as well; thus, it is a short step from perceiving a text as incoherent to perceiving the writer as somehow being deficient as well”.

This theoretical overview has attempted to give an insight into the Anglo-American writing conventions as compared to the writing traditions of some other cultures that may have influenced the educational and scientific practices of Estonian writers. As writing conventions differ cross-culturally, applying the preferred schemata of the Estonian writing style to Anglo-American writing may hinder Estonian academics' effective international communication. Therefore, driven by the need to participate in the English-speaking academic discourse communities, writers are being challenged to develop their discourse interaction norms. The assumption is that the writers' likely preferences for L1 textual organisation, argumentation and style might provide some explanations for common problems they encounter in English written discourse. Estonian writers' difficulty in producing coherent texts in English will be discussed in more detail in the following chapters, based on the findings of the experimental study conducted at the Tallinn University of Technology.

CHAPTER II: AN EMPIRICAL STUDY

The aim of the research

Estonian writers' needs to participate in international English-speaking discourse communities have increased since Estonia regained its independence in the early 1990s. However, writers seem to lack knowledge of Anglo-American writing conventions and language competences involved in writing. Obviously, quite a number of academics may have experienced difficulty in publishing their research results – there have been cases that the writers' work has been rejected merely due to their inadequate L2 competence. This, in turn, may hinder the writers' success in international academic communication.

The aim of this research was to find out how knowledgeable Estonian writers are about the English academic writing conventions and how effective they are in English written discourse. Apart from that, the research attempted to map specific problems that Estonian writers encounter in composing texts in English and identify the aspects of writing that are likely to be affected by the Estonian cultural and language conventions. One of the goals of the research was to clarify Estonian writers' needs and behaviours in English written discourse in order to upgrade academic writing instruction, develop L2 writers and improve the quality of their written texts.

The research stated the following hypotheses:

- a. Estonian academic writers consider linguistic competence (i.e., mastery of grammar and lexis) the most important aspect of effective English written discourse;
- b. Estonian academic writers lack discursal and socio-cultural competences of English writing. Irrespective of their linguistic competence, higher level of English does not necessarily guarantee a better quality of writing.

- c. English writing instruction in Estonia is focused mostly on developing students' linguistic competence (i.e., grammar and lexis), whereas rhetorical and socio-cultural aspects of writing are not adequately addressed.

The study setting

The study was conducted with academic faculty members, undergraduate students and English language teachers of Tallinn University of Technology (TTU) in 2004-2005. The data for the research were obtained from the following sources:

- the academics' questionnaire;
- the academics' interviews;
- the undergraduate students' needs analysis questionnaire;
- the English language teachers' questionnaire;
- the qualitative analysis of student writing samples.

Method

Sample

In the study, two main target groups of Estonian academic writers were examined: *expert* writers (the academics) and *novice* writers (the undergraduate students). The writers were clearly distinguished by age, level of education and L1 literacy. The first group involved academics, highly educated and literate in their native language, who had very sophisticated, complex and demanding writing needs for international communication (e.g., scientific articles, dissertations, grant proposals, etc.). The second group comprised tertiary level students, acquiring the academic written language for educational (e.g., essays, papers, theses, etc.) or career enhancement purposes. While the specific writing needs of those two target groups were quite varied in terms of cognitive aspects and communicative functions, both groups had the real-world need for writing to meet the

demands of the academia. Hereby, it should be pointed out that quite a large number of student subjects would be expected to join the specialist writing community in their further studies or career.

With the aim of investigating also tertiary level L2 writing instruction, the survey involved a target group of English language faculty members of TTU:

The academics

The data of this study were obtained from the self-reporting questionnaire and the informal open-ended interview with engineering and business faculty members of TTU. The study investigated how members of the academic staff valued the importance of English in their academic success, what their main difficulties in L2 writing were and what their views on the main challenges of writing in academic contexts were.

The sample group of 40 academics was selected randomly through the directory of the academic faculty of the university. The selection was based on the principle that a diverse range of academic fields should be represented. Overall, the data were gained from a 25% return of the questionnaires sent by e-mail to 40 academic faculty members and from interviews with five academic faculty members.

The target group of ten academics represented a variety of professional backgrounds such as mechanical engineering, computational mathematics, telecommunications, environmental engineering, chemical engineering, economics, information technology, machine engineering and biotechnology. The faculty members held academic degrees of PhD (5), DSc (1) and MSc (1); three of the respondents were pursuing their Master's studies at TTU. The group included three female subjects and seven male subjects who came from different age groups (25-65). Based on the researcher's subjective observation and the academics' self-evaluations, they represented different levels of L2 language proficiency (from intermediate to advanced) and different levels of academic writing

experience (novice to expert). The total number of articles that the academics had written for international publication in English was 470, ranging from 2-15 (for novice writers) to 70-150 (for expert writers).

The undergraduate students

The data for this study were gained from the needs analysis questionnaire and student writing samples in the EAP Course run at TTU in the autumn term of 2004. The study explored undergraduate students' general views on writing and attempted to determine the main problems they had in English academic writing. The focus of the research was to clarify students' writing needs and practices in order to upgrade English academic writing instruction and develop novice academic writers.

The study involved 23 second-year students (aged 18-20) of information technology and engineering. There were 19 (83%) male subjects and 4 (17%) female subjects in the sample group. None of the subjects claimed to have had any previous experience with real-world (English) academic writing. 12 (52%) subjects were at the *intermediate + level* of English proficiency and 11 (48%) subjects were at the *advanced level* of English proficiency. The subjects designated as *intermediate +* had an entry level *Nelson Placement Test** (see Tables 1a, 1b) score of 85-90. The subjects designated as *advanced* had an entry level *Nelson Placement Test* score of 98-113. Based on DIALANG** (see Tables 1a, 1b) test results, the subjects' language proficiency can be related to the Common European Framework of Reference (CEFR, 2001) Level B2 (Vantage Level) and Level C1 (Effective Operational Proficiency Level) respectively (see Appendix 12 for the description of the competences at the CEFR levels).

Tables 1a and 1b summarise findings on the subjects' command of English as follows:

Table 1a. *Academic English Group: B2 Level CEFR.*

Student No	Nelson Placement Test*	DIALANG** Writing Test	DIALANG Structure Test
1	90	B2	B2
2	89	B2	B2
3	89	B2	C1
4	89	B2	B2
5	88	B1	B2
6	88	B2	B2
7	87	B2	C1
8	87	B2	B2
9	87	B2	B2
10	86	B2	B2
11	86	B1	B2
12	85	B1	B2

Table 1b. *Academic English Group: C1 Level CEFR.*

Student No	Nelson Placement Test*	DIALANG** Writing Test	DIALANG Structure Test
1	113	C1	C2
2	113	C1	C2
3	112	C1	C2
4	111	C1	C1
5	109	C1	C2
6	108	B2	C1
7	107	C1	C1
8	105	C1	C1
9	104	C1	C2
10	104	C1	C1
11	99	B2	C1

* *Nelson Placement Test is a paper-based diagnostic proficiency test of English yielding the highest score of 125 points.*

** *DIALANG is a computer-based Internet-delivered diagnostic test, developed with the support of the European Commission. DIALANG covers a number of languages at all levels from beginner to advanced. It offers separate tests for reading, writing, listening, grammatical structures and vocabulary. DIALANG provides users with self-assessment opportunities, gives them feedback on their performance and tells them how they can improve their competence.*

The study involved students at two different levels of language proficiency (levels B2 and C1) in order to find out whether the general high level of English would lead to competent writing and whether certain areas of writing need to be specifically taught.

The subjects participated in an integrated-skills EAP course. The institutional course has been designed to prepare students for future academic activities by providing them with the foundation for development in English academic communication. The course is run over a 16-week semester for a total of 40 academic hours. It ends in a final English examination (which is also a graduation requirement) with an equally weighted assessment of all four skills. The examination writing test requires students to compose a 250-word

argumentative essay in 45 minutes on one of the two assigned prompts. Students' examination essays are scored on an institutionally devised five-point analytic rating scale (see Appendix 4), which assesses students' proficiency of *grammar, vocabulary, organisation, spelling and content*.

The English language teachers

The data for this study were collected from the questionnaire carried out among 16 qualified English teachers of the Language Centre of TTU. The respondents represented different age groups: 4 (25 %) teachers were more than 55 years old, 4 (25%) teachers were in the age group between 46-55 years and 8 (50%) teachers were in the age group between 40-45 years. Half of the respondents had a tertiary-level teaching experience of more than sixteen years, 5 (31%) teachers had the experience of 11-15 years and 3 (19%) teachers had the experience of 6-10 years. All of the respondents were female. 14 (88%) of them had a 5-year Diploma degree equivalent to a Bachelor's degree, one teacher had a Master's degree and one teacher was studying for a Master's degree. Nearly half (44%) of the respondents had been participating in several English for Specific Purposes training courses and projects initiated by the British Council. More detailed characteristics of the teachers are provided in Table 2 below:

Table 2. *Teachers' profile.*

Age	Number	Percentage
40-45	8	50
46-55	4	25
>55	4	25
Tertiary-level teaching experience		
6-10 years	3	19
11-15 years	5	31
16-21 years	4	25
>21 years	4	25
Qualification		
BA or equivalent (5-year diploma)	14	88
MA	1	6
Pursuing for MA	1	6

Research procedure

The academics' questionnaire (Appendix 5)

The examination of business and engineering faculty views on academic writing was expected to provide an understanding of the various aspects of expert writing the Estonian undergraduate students would be involved in when they proceed in their studies and research. The 21-item questionnaire was administered to academic faculty members by e-mail and they were given three weeks to respond to it. The questionnaire was compiled in the Estonian language to minimise L2 interference with the subjects' responses and maximise the authenticity of their answers. The instrument was devised to find answers to the following questions:

- How difficult is it for academics to produce a scientific article in English (Q1)?
- What problems do academics have in academic writing (Q3)?
- In what aspects of writing do academics require language support (Q4)?
- How do academics compose written texts (Q2, Q5, Q6)?
- What aspects of writing do academics consider most important in improving the readability of written texts (Q19)?
- How do writers improve the quality of their final products (Q20, Q21)?

In addition, the questionnaire explored certain aspects of discourse competence (e.g., written text organisation and style) in order to elicit answers to the following questions:

- What text organising principles do academics follow in writing (Q 9, Q10, Q11)?
- How do academics achieve cohesion and coherence in written texts (Q7, Q8, Q9, Q13, Q15, Q16)?
- What stylistic preferences do academics have in writing (Q7, Q8, Q12, Q14, Q17, Q18)?

The instrument was comprised of 21 questions of a variety of types. Closed-ended items and multiple-choice items were chosen to ensure feedback from as many subjects as possible. Most questions (1-7, 12-10, 21) included an open-ended section so that the respondents could provide clarification or comments on the specific issue.

Closed items were based on a 5-point Likert scale, highlighting the importance and/or difficulty of different aspects of writing in the academics' written discourse. Closed-ended questions (Q1, Q3) were designed to determine the areas in which the academics had encountered most problems in writing. This question type was also used to specify in which aspects of writing the respondents would need support most (Q4), how much time they usually spent on producing a scientific article (Q6) and how they improved the quality of their final product (Q20).

Multiple-choice items were designed to find out how academics composed written texts (Q5) and what aspects they considered most important in improving the readability of their texts (Q19). Besides that, multiple-choice questions were used to examine some aspects of the academics' written language: how they placed information in the text (Q9), what textual patterns they used (Q10, Q11), how they achieved cohesion and coherence in texts (Q13, Q14, Q15, 16) and what stylistic features they preferred in their written texts (Q17, Q18).

In addition to the item types mentioned above, the questionnaire contained checklists (Q7, Q8).

The academics' interview

The interview was designed to investigate the respondents' perception of academic written discourse and gain insight into the processes Estonian writers (both novice and expert) were involved in while producing texts in English. The open-ended informal interviews were carried out on a voluntary basis after the academics had completed the

self-reporting questionnaire (see Appendix 5). The interviews were conducted in Estonian. The responses were expected to contribute towards a qualitative analysis of the data obtained from the self-reporting questionnaire, which served as a basis for the interview. In addition, the interviewees were asked to reflect on the following questions:

- What is the Estonian academics' perception of the nature of English academic written discourse?
- What does expertise in writing involve?
- What language skills would Estonian novice academic writers need most for successful communication in English?

Similarly to the questionnaires, the interviews were conducted in Estonian to ensure the reliability of the academics' responses and minimise the English language interference with their answers.

The students' questionnaire (Appendix 6)

A general English needs analysis questionnaire was conducted in the first class of the EAP course. The questionnaire was designed and completed in English. It contained twelve questions, eight of which (Q3, Q5, Q7, Q8-12) were aimed at eliciting students' attitudes and expectations of writing at tertiary level. Question 3 asked students to self-assess their English language ability, including information on their competence in writing, on a 5-point scale (1 – poor; 5 – excellent). Question 5 focused on the frequency of writing activities the subjects were supposed to do in their studies or job, whereas Question 7 examined the subjects' specific writing needs. Question 8 explored what English skills the students perceived should be improved for their future career. Question 9 asked the subjects to define 'academic writing'. In response to Question 10, the subjects were expected to rank, in the descending order of importance, the criteria such as *grammatical accuracy, spelling and punctuation, subject content, overall organisation, vocabulary* and

good ideas in academic writing. A similar ranking order item was included in the teachers' questionnaire (see Appendix 7, Q1). Question 11 asked students to give comments on how they would improve the readability of their written texts and Question 12 investigated students' perceptions of the communicative aspects of writing.

The writing section of the questionnaire contained closed questions (Q5), open-ended questions (Q7, Q9, Q11, Q12) and rank order items (Q8, Q10).

The English language teachers' questionnaire (Appendix 7)

The investigation of the language teachers' views on academic writing was aimed at defining the role of text-level rhetoric in tertiary-level English classes. The teachers' questionnaire was devised and completed in English. The instrument was composed of four items focused on the following questions:

- What are the most important features of effective academic texts (Q1)?
- How can text be made coherent (Q2, Q3)?
- How could students improve their writing (Q4)?

The first question asked the respondents to rank, in the descending order of importance (1 – most important; 6 – least important), the criteria such as *grammatical accuracy, spelling and punctuation, subject content, overall organisation, vocabulary and good ideas* in academic writing. The teachers were expected to assess the importance of the six aspects of writing, differentiating between students with varied language competence of levels B2 and C1 respectively. A similar ranking order item was included in the students' questionnaire (see Appendix 6, Q10). In addition, the English teachers' questionnaire contained three open-ended questions in which the respondents were supposed to define what 'text organisation' was (Q2), how cohesion could be achieved in written texts (Q3) and how students could make their writing more effective (Q4).

A case study: Student writing samples

A comparative analysis of the B2- and C1-level subjects' writing samples was carried out to diagnose their common problems in English written texts. The samples were collected in the first writing class when the subjects were given a task to compose a 250-word essay on a given prompt "How can we make the Internet more efficient?". With regard to genre, the students were instructed to write an expository essay with some elements of argumentation and problem solving. The rationale for the combined genre was to examine novice academic writers' overall written discourse competence, not only the specific skill of argumentation, which not many of them had learnt at school (see also p. 23). As regards the context of writing, the students composed their texts under test conditions in class subject to further peer evaluation and teacher feedback. The writers were given 45 minutes to complete the task. The samples were analysed before the peer evaluation and teacher feedback were taken into consideration.

For the purposes of this research, the students' products were analysed with focus on the discursual and rhetorical categories of a written text as follows:

- the main idea and the writer's purpose;
- text organisation (the introduction, the body and the conclusion, etc.);
- paragraph organisation (topic sentences, supporting sentences, concluding sentences, etc.);
- text unity: cohesion and coherence (patterns of structure, cohesive devices, textual references, etc.);
- style and register (hedging, metadiscourse, variety of structures, etc.);
- communicative aspect (audience awareness, reader expectations, etc.).

Results

The academics' questionnaire (Appendix 5)

On the basis of questionnaire findings, the following survey highlights some of the major difficulties the Estonian academics have encountered in writing research articles in English. Some text-level problems of the Estonian academics' writing identified in the research will be addressed together with the analysis of student writing samples. For the purposes of data analysis, the *combined totals* of the responses were used. Detailed distribution of the data collected in the questionnaire is provided in Appendix 8.

Although the questionnaire was delivered by e-mail to 40 academic faculty members, only ten academics (25%) responded to the questionnaire. In addition, two academics, not actively involved in publishing, responded to the mail message and referred to candidates who might contribute to the research.

Filling in the questionnaire, most academics (90%) provided complete answers to closed-ended items and multiple-choice questions; however, only half of the academics followed the instructions and interpreted list items (Q7, Q8) adequately. As is often the case, the majority of the subjects left the open-ended items unfilled and only 20% of the academics used the space given for explanations and commentary.

Question 1: How difficult do you find the following aspects in writing a scientific article?

To determine the areas of English writing in which the subjects had encountered most problems, they were asked to evaluate seven aspects of writing in terms of difficulty (1 – very easy; 2 – quite easy; 3 – rather difficult; 4 – very difficult; 5 – hard to say).

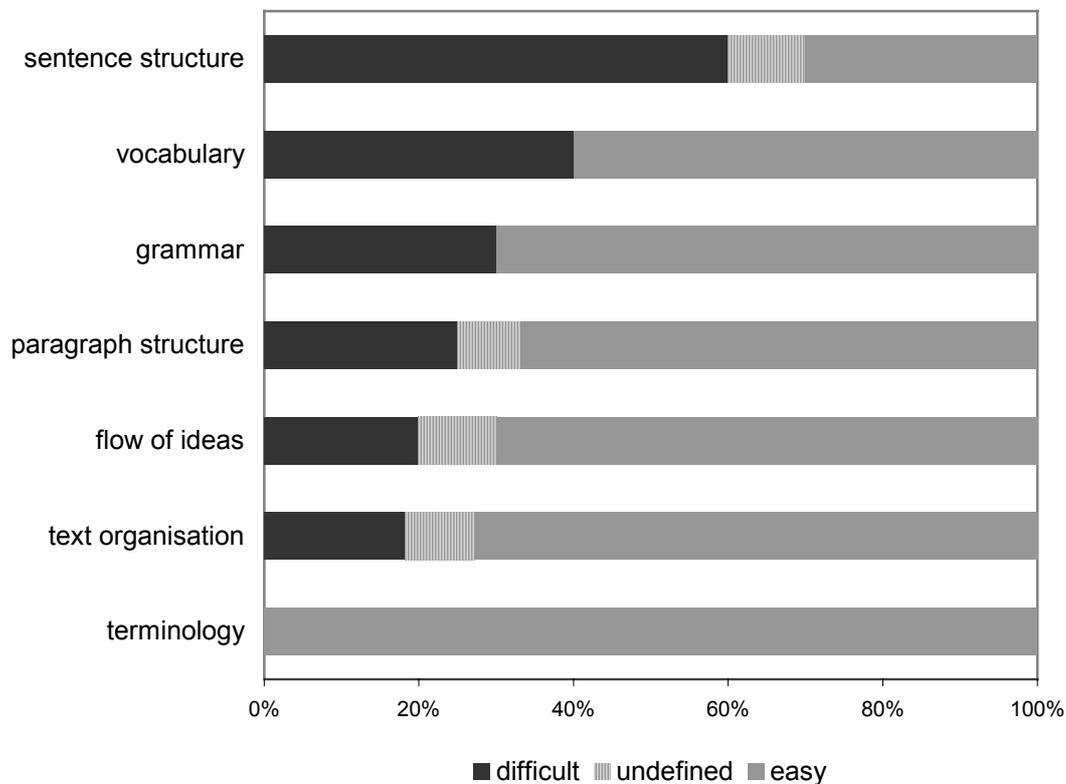


Figure 6. How difficult do you find the following aspects in writing a scientific article?

The overall findings, shown in Figure 6, suggest that as many as 60 % of the respondents found sentence structure most problematic in writing. 30% of the respondents reported problems with *grammar* and 40% of them with *general vocabulary*. At the same time, a large number (70%) of the respondents considered *cohesion* quite easy to achieve and declared to have no difficulty with *paragraph* or *whole text organisation*. As regards *terminology*, none of the subjects mentioned difficulty in that area.

Question 3: What problems did you encounter as a ‘novice’ academic writer?

To determine the English writing skills in which the faculty members were least confident as ‘novice’ writers, they were asked to rank different aspects of writing in terms of frequency (1 – often, 2 – sometimes, 3 – seldom, 4 – never, 5 – hard to say).

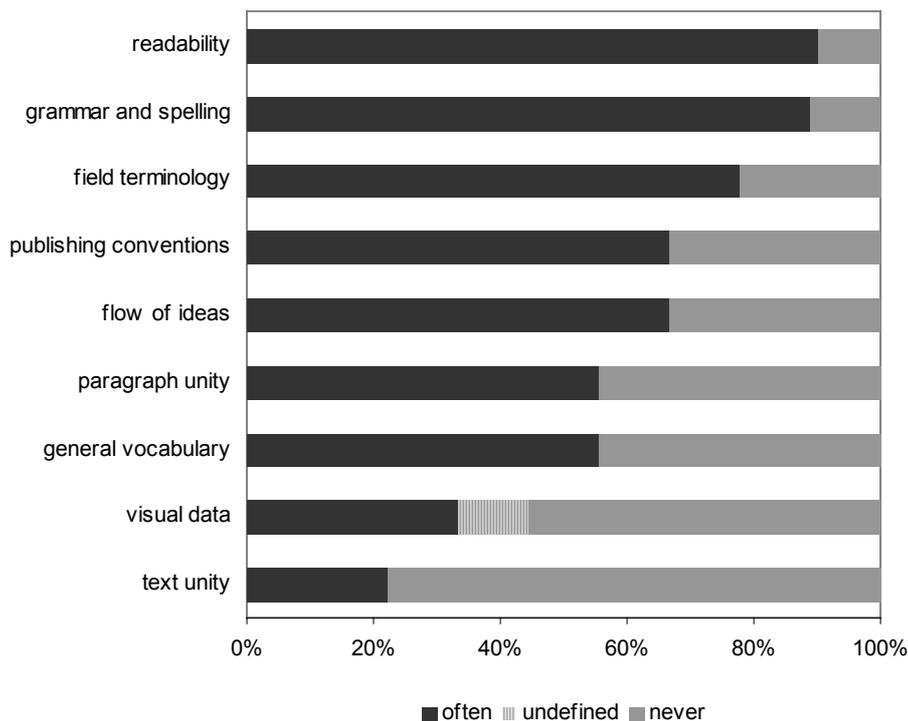


Figure 7. What problems did you encounter as a 'novice' academic writer?

Figure 7 shows that nearly all (90%) of the academics considered the issue of text *readability* as one of their greatest concerns in written communication. In addition, as many as 88% of the responses reflected the writers' concerns with *grammar and spelling*. Even though 23% of the answers indicated that *field terminology* was the aspect of academic language in which the respondents were most confident, 77% of the answers reflected problems in that area. 67% of the answers suggested that the academics had encountered problems with international *publishing* apparently due to the poor knowledge of specific genre conventions.

In scientific writing, the exploitation of non-linear features such as charts, graphs and visual representations is as important to the reader as the text itself. Quite a big proportion (70%) of the academics recognised the facilitating role of visual data in organising and

presenting scientific information. They also held that presenting visual data in written discourse was time-consuming rather than difficult.

Question 4: In which aspects of writing would you require language support?

To find out in which aspects of English writing the academics would require language support most, they were asked to evaluate several aspects of writing with respect to frequency (1 – often; 2 – sometimes; 3 – seldom; 4 – never; 5 – hard to say). As can be seen in Figure 8, a significant proportion of the answers revealed the academics' concern

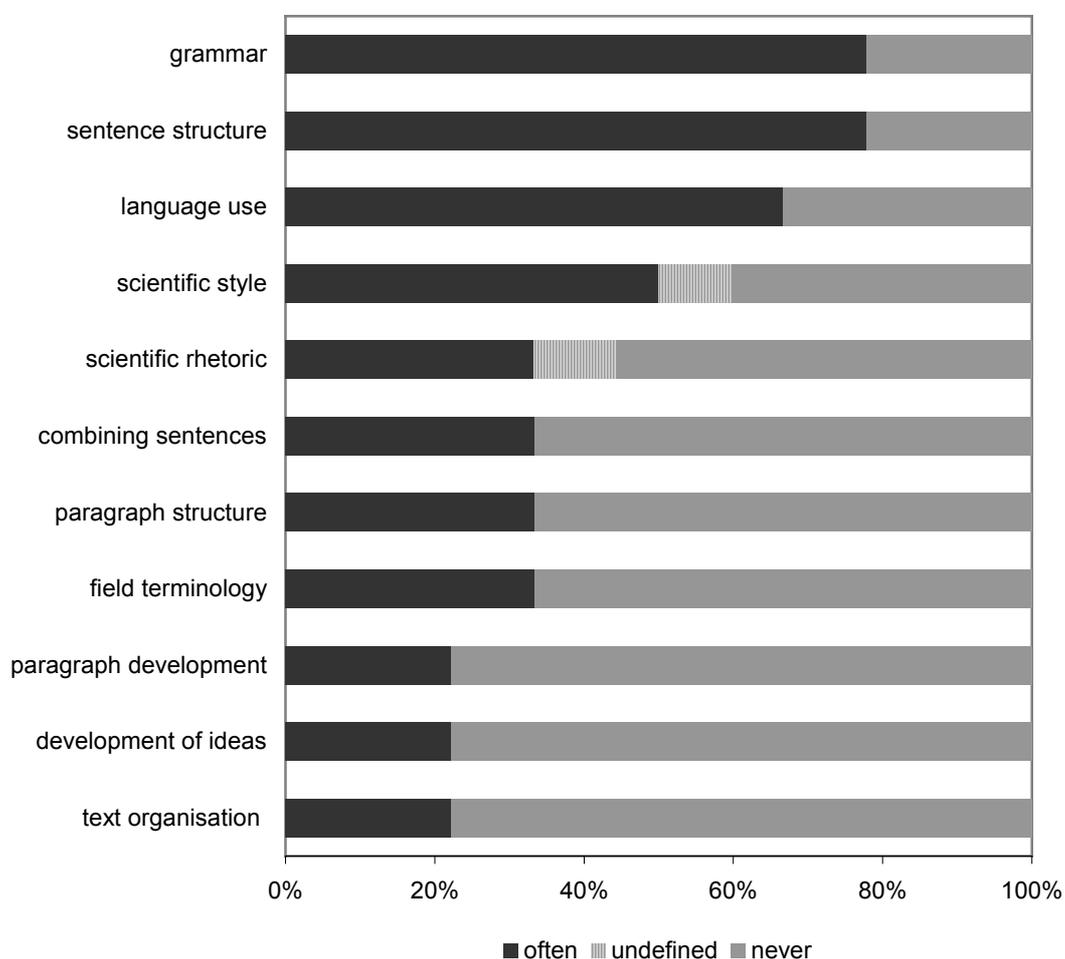


Figure 8. In which aspects of writing would you require language support?

about their insufficient knowledge of *grammar* (78%) and *syntax* (78%). Furthermore, 66% of the answers suggested that *language use* should have more focus in English

language instruction. Surprisingly, as many as 78% of the responses indicated that establishing *text overall organisation* in scientific writing was not problematic for the academics. Such responses suggest that the subjects may have defined the term ‘organisation’ as equivalent to the term ‘layout’. However, the low rating attributed by the academics to *cohesion*, *coherence*, and *text organisation* may indicate that they were not aware of the rhetorical and discursal aspects of language.

Question 6: How much time does it take you to write a scientific article?

To determine how efficient the academics were in composing a scientific article, they were asked to evaluate certain aspects of writing in terms of time consumption (1 – often; 2 – quite a lot; 3 – quite little; 4 – very little; 5 – hard to say) in both Estonian and English writing. Figure 9 reveals that the following aspects of text composing were perceived quite time consuming in *L2 writing*: *revising the text for content* (73%), *brainstorming ideas* (70%), *working on drafts* (62%) and *visuals* (62%), *editing the final product for content* (62%) and *revising the text for language* (62%). On the other hand, only 43% of the findings suggested that *text organisation* was of great concern to the academics and 43% of the findings revealed a similar concern about *publishing conventions*. There appeared to be some differences with respect to time constraints in *L1 writing* (see Appendix 8). As many as 72% of the answers indicated that *editing the final product for content* was time consuming for the writers and 52% of the answers showed a similar difficulty in *revising the text for content* and *meeting the publishing conventions*. In contrast, only two academics considered *text organisation* of much concern in their L1 writing

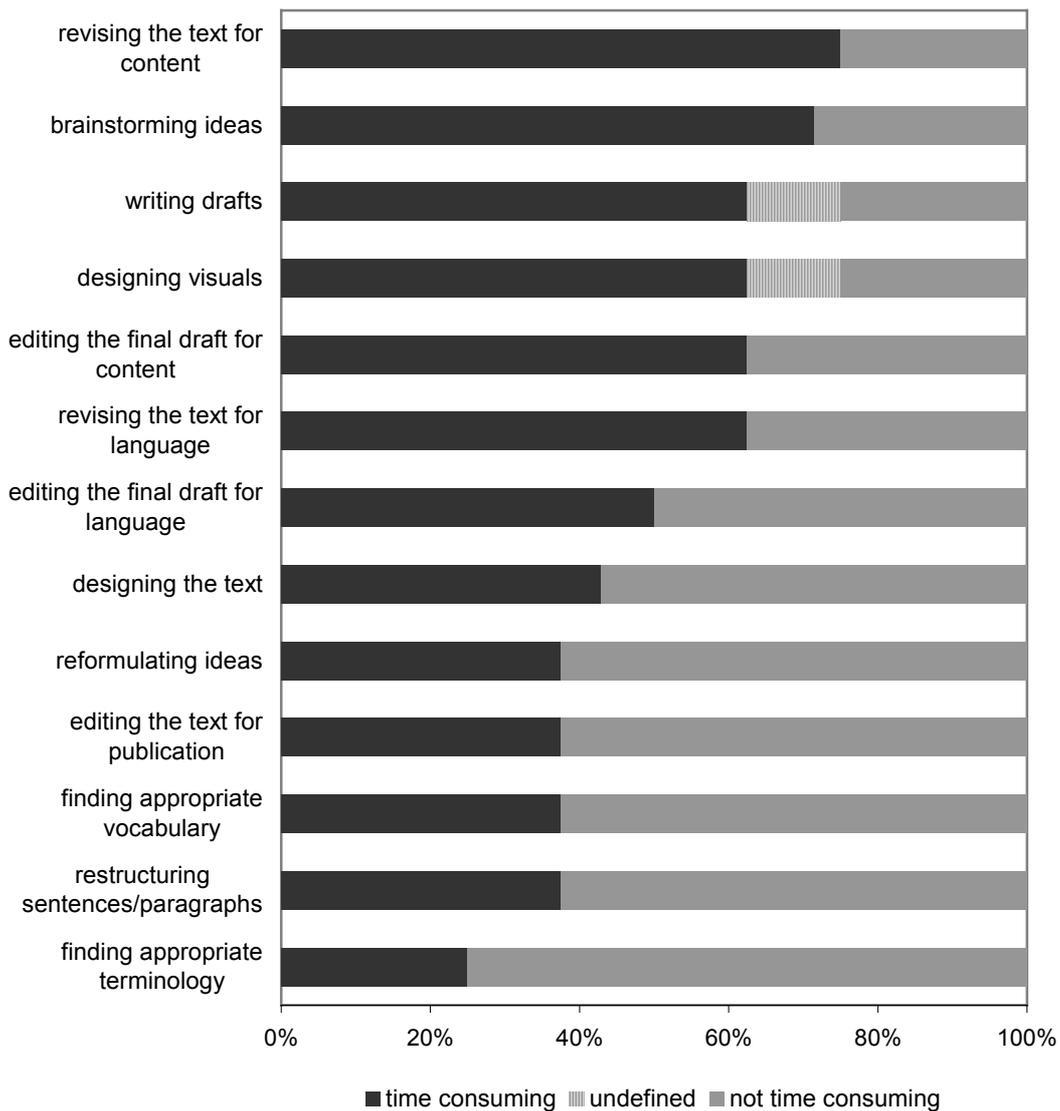


Figure 9. *How much time does it take you to write a scientific article in L2?*

Overall, the respondents held that L1 and L2 writing processes were in broad terms similar. In the light of this, the transfer of L1 prior knowledge and strategies of writing seems to occur, especially at the higher level of L1 and L2 proficiency. A problematic issue was that two academics reported incorporating direct L1-to-L2 translation strategies into L2 writing processes, claiming that first they wrote their articles in Estonian and then translated the texts into English (Q5). In fact, only one writer believed that there were clear differences in the choice of strategies for composing L1 and L2 texts.

Question 19: Which of the following aspects do you consider most important in improving the readability of your written texts?

To investigate what the academics believed to contribute most to the production of readable writing, they were asked to list three aspects of writing out of the following eight: *text overall unity, paragraph unity, clear and simple style, complex structures, varied structures, repetition of key words, usage of connective ties and pronoun references*. Figure 10 indicates that 70% of the respondents placed significantly higher value on *text*

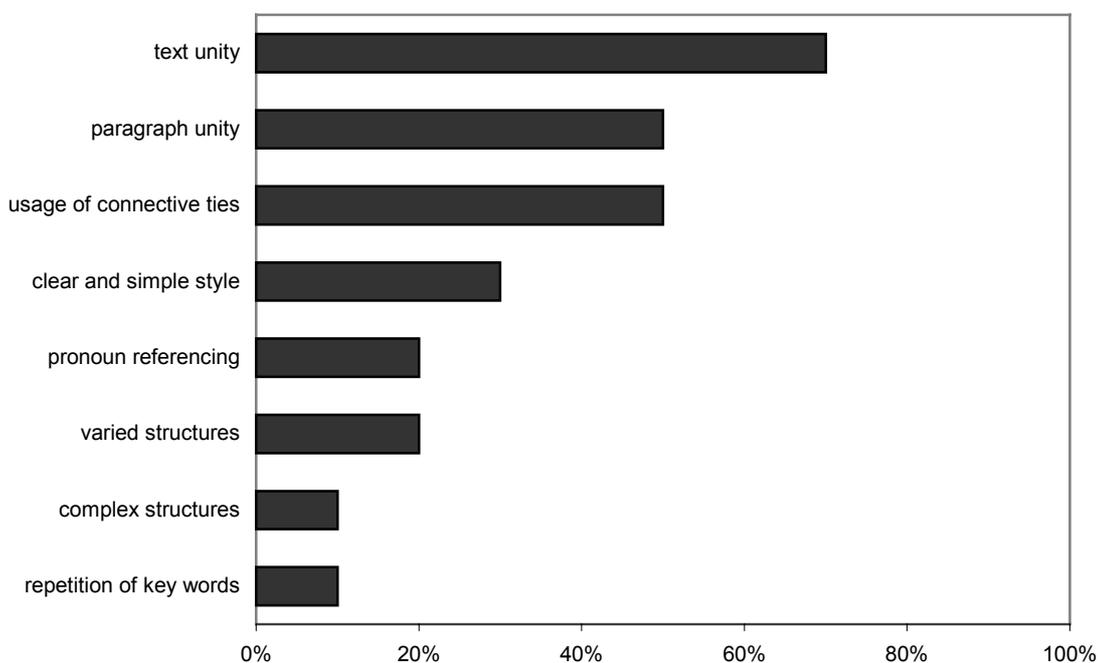


Figure 10. Which of the following aspects do you consider most important in improving the readability of your written texts?

unity, 50% of them attributed much importance to *paragraph unity*, and 50% of them to *cohesion* (e.g., the usage of cohesive and lexical ties, etc.). In contrast, only 20% of the academics considered *pronoun referencing* of high significance. The survey revealed that while the academics valued the knowledge of field-specific lexis very highly, only one of them attributed real importance to *lexical repetition* in creating a coherent text. Finally, it

was surprising to discover that a fairly small number (30%) of the subjects considered *simple and clear style* an important textual feature in the creation of effective texts.

Question 20: How do you improve the quality of the final draft of your written text?

To find out how the respondents improved the quality of their final products and how they enhanced the readability of texts, they were asked to evaluate different aspects of writing on a five-point scale (1 – very important; 2 – quite important; 3 – not so important; 4 – not important at all; 5 – hard to say). First of all, the respondents were expected to determine what importance they attached to *content*, *text organisation* and *the linguistic aspects of writing* in the final stage of text revision. Overall, *linguistic accuracy* was perceived as ‘very important’ in 60% of the responses and ‘quite important’ in 20% of the responses. At the same time, only 45% of the answers indicated the high importance of *text organisation* and as few as 34% of the answers gave preference for the *content* of writing.

On the question of what aspects of language competence the academics valued most, they were expected to consider both the *surface-level* aspects of writing such as grammar, vocabulary, syntax, spelling and punctuation, and the *text-level* aspects of writing such as cohesion and text unity. Not surprisingly, the majority of writers claimed to focus primarily on the *surface-level aspects* of texts, considering those of utmost importance in increasing the readability of their writing. Figure 11 reveals an expected result of the study: the majority of the answers indicated that the academics considered *spelling and punctuation* (90%) and *sentence structure* (81%) highly important in effective writing. While the proportion of responses attributed to the role of *grammatical accuracy* in improving the quality of writing was quite high (78%), a considerably lower proportion of the responses showed similar concerns about *text unity* (45%) and *cohesion* (33%). In the same way, *cohesive devices* were considered ‘not so important’ in 55% of the responses

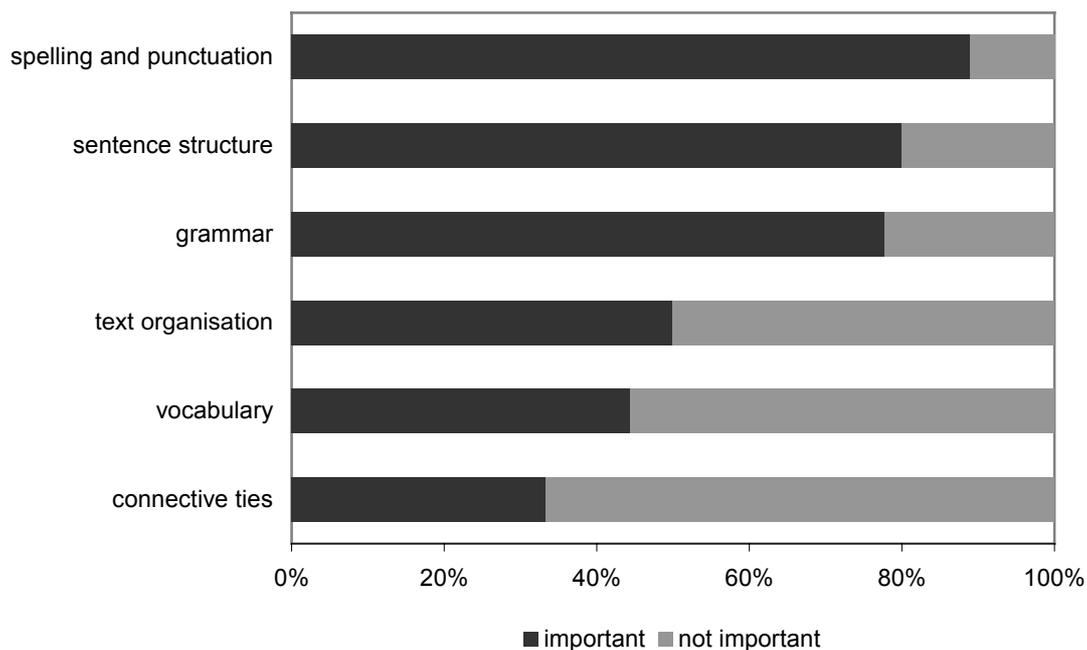


Figure 11. *How do you improve the quality of the final draft of your written text?*

and attached ‘no importance’ in 12 % of the responses. *Text organisation* was claimed to be ‘not so important’ in as many as 55% of the subjects’ answers.

Question 21: Where do you receive language feedback on your scientific articles from?

To investigate where writers received language feedback on their scientific articles and what sources they consulted for assistance, they were asked to choose between science editors, language consultants, peers, reference books and the Internet. Apart from that, the respondents were expected to define the frequency of addressing those sources (1 – often; 2 –sometimes; 3 – seldom; 4 – never). As is shown in Figure 12, the most common sources of help were *language consultants* and *reference books*, both mentioned as being used ‘often’ in 33% of the cases and as being used ‘sometimes’ in 67% of the cases. The next most popular source was *journal editors*, which were consulted ‘often’ in 20% of the cases and ‘sometimes’ in 60% of the cases.

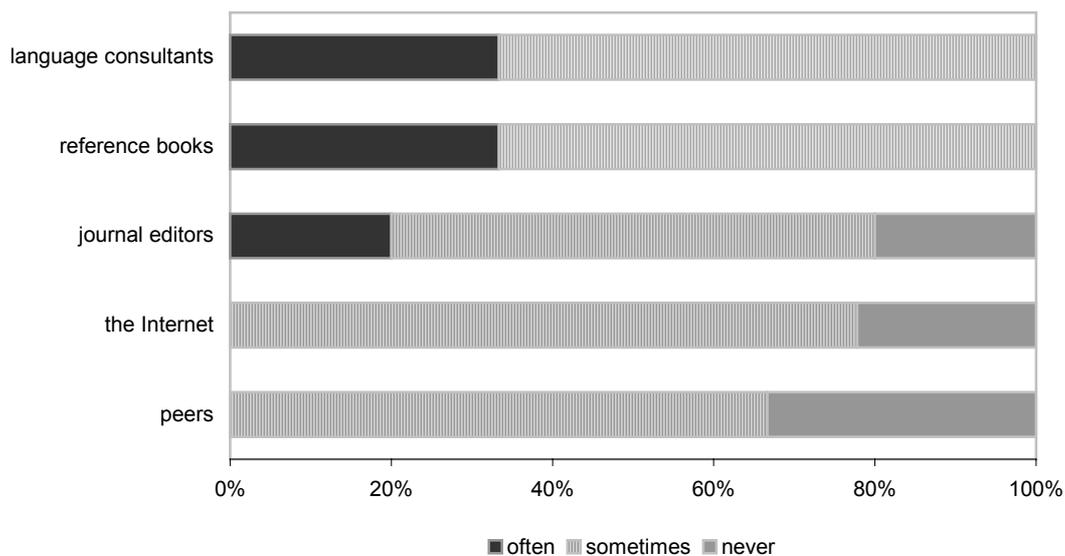


Figure 12. *How do you receive language feedback on your scientific articles?*

In fact, none of the respondents claimed that they would ‘never’ need any language assistance. Surprisingly, however, a quarter of the answers showed that the academics did not recognise the *Internet* as a possible source for reference materials and model texts.

The academics’ interview

Five engineering faculty members (out of the target group of ten academics) participated in the open-ended informal interview on a voluntarily basis after they had completed the self-reporting questionnaire (see Appendix 5). The academics that had agreed to be interviewed claimed to have sufficient practice in English academic writing and adequate English written language competence.

The questionnaire responses and follow-up interviews with the academics provided further evidence on the Estonian writers’ perception of the nature of English academic written discourse, reflecting mainly two complementary views. Most subjects agreed that academic writing largely entailed a transfer of *general writing skills* across different contexts. The writing skills that the academics attributed high importance to in composing articles included *grammar* and *spelling*, *field-specific terminology*, *sentence structure* and

paragraph organisation. Furthermore, one academic reported to value *clarity in style* and another academic appreciated *logical text development*. None of the respondents indicated that *audience awareness* was crucial in effective writing, although they mentioned that “the readability of sentences is important”.

Drawing on the data received from the academics’ questionnaire and the interviews, the most universal aspects of writing throughout all academic disciplines appeared to be language use including *grammar* and *field terminology* and effective *sentence structure*. An interesting observation in the interview was that two academics, experts of chemical engineering and mechanical engineering, reflected also upon the uniqueness of *discipline-specific writing*, with particular disciplinary thought involved in it. They suggested that documenting the design and experimental processes in the written discourse of civil engineering, for instance, would be much different from that of mechanical engineering or business written discourse.

Further reflecting on the issue, the academics attempted to highlight the specific skills that tertiary level students (novice scientific writers) would need for successful written communication. The academics highlighted the skill to *present ideas concisely* and the skill to *summarise* and *condense scientific literature*. With similar interviews, Johns has identified six factors that the native English academics believe contribute to academic ‘illiteracy’ among writers as follows:

1. lack of disciplinary schemata;
2. weakness in identifying the larger purposes of texts;
3. little planning when reading and producing texts;
4. inability to connect concepts with examples or facts;
5. limited disciplinary vocabulary;
6. ‘unwillingness’ on the part of the students to be objective when approaching texts or topics representing conflicting values or beliefs.

(Adapted from Johns 1997)

The Estonian academics were exposed to the above *six factors* to comment on. In their responses, the academics shared most of the views reported by Johns. They all emphasised

the importance of good English writing skills to successful performance and effective communication in the scientific world. For example, all five interviewees held that novice academic writers often showed inability to support claims with evidence (e.g., facts, examples, statistics, etc.) and draw logical connections. Two academics believed that students lacked disciplinary schemata and one academic suggested that students had limited technical vocabulary.

In sum, most interviewees believed that success in academic writing was largely dependent on a set of well-developed general writing skills; two academics mentioned also disciplinary norms (e.g., terminology, publishing conventions, genre conventions, etc.) as characteristic of scientific writing. It should be stressed, however, that the academics seldom reflected upon the *rhetorical qualities* of a written text (e.g., cognitive structuring and rhetorical forms of specialist genres, etc.). Even though the academics evaluated their scientific articles primarily with respect to content and accuracy of information, they all claimed to spend most time on identifying and correcting *surface level* mistakes of grammar and English usage. The survey also revealed that not all of the academics considered their English language competence adequate for international communication and publication. At this point, it is important to note that not all of the academics considered English writing skills as important as subject knowledge in international academic discourse.

The students' questionnaire (Appendix 6)

Overall, 23 subjects (12 B2-level students and 11 C1-level students) completed the questionnaire distributed to them in the first EAP class. The majority (90%) of the subjects provided answers to all the questions and responded to open-ended questions in adequate detail. In some cases (Q12), the students had misunderstood the question and provided unexpected or irrelevant answers.

In Question 9, the students were asked to define ‘academic writing’. The subjects’ responses did not reveal any significant differences of opinion between the two sample groups (B2 and C1). The students characterised academic writing with the appropriate words such as ‘*formal*’ (35%), ‘*complex*’ (22%), ‘*terminology*’ (26%), ‘*scientific*’ (18%), ‘*style and form*’ (13%) and ‘*conventions and norms*’ (9%). A brief sampling of the responses to define academic writing is given below:

1. Academic writing is a way of a student to express his (her) thoughts on a piece of paper with appropriate academic phrases. (B2)
2. /.../ it is using the rules and certain phrases, for instance, while writing the essay, we use such rules as a layout, we use correct structure, we use specific phrases. (B2)
3. /... / [it is] writing research in an academic manner. (B2)
4. Academic writing is official style of writing. You must know a little bit more than you have studied in high school. (B2)
5. An academic writing course is an excellent way of improving one’s writing skills in order to perform well and persuade people. (C1)
6. /.../using academic form and style in writing. (C1)

The unanticipated result was that in their definitions, none of the subjects seemed to connect ‘academic writing’ directly with the linguistic competence of grammar and lexis.

The students’ responses to Question 8 revealed that most of the subjects recognised the value of good writing skills in academic success, although responses indicated some variability in the target groups (B2 and C1). An interesting observation was that the C1-level subjects valued the importance of English academic writing skills and further instruction in L2 academic writing much more highly than their lower-level peers. For example, a substantial number (64%) of the C1-level students ranked competence in writing as one of the most important aspects for the success in their future academic and professional career; only 25% of the B2-level subjects, on the other hand, considered the improvement of writing skills of high importance for their academic success.

Reflecting on their language competence (Q 3), all the C1-level subjects perceived that they would need more assistance and instruction in English written discourse at university. While only 25% of the B2-level students attributed high significance to L2

writing ability and writing instruction at tertiary level study, a significant number (75%) of them ranked *speaking* as the most valuable language skill in L2 academic discourse.

In terms of writing frequency, 36% of the C1-level respondents claimed that they would need to write ‘often’, 46% of the students chose ‘sometimes’ as an answer and only 18% of the students chose ‘rarely’ as an answer. None of the C1-level subjects claimed that they would never have to write in English. In response to the same question (Q7), only one B2-level student chose the answer ‘often’, 58% of the students chose the answer ‘sometimes’ and the equal proportion (17%) of the subjects chose the answers ‘rarely’ and ‘never’ respectively.

Responding to Question 10, the students were supposed to rank six aspects of academic writing significant for text *quality*. Figure 13 presents the *combined totals* of

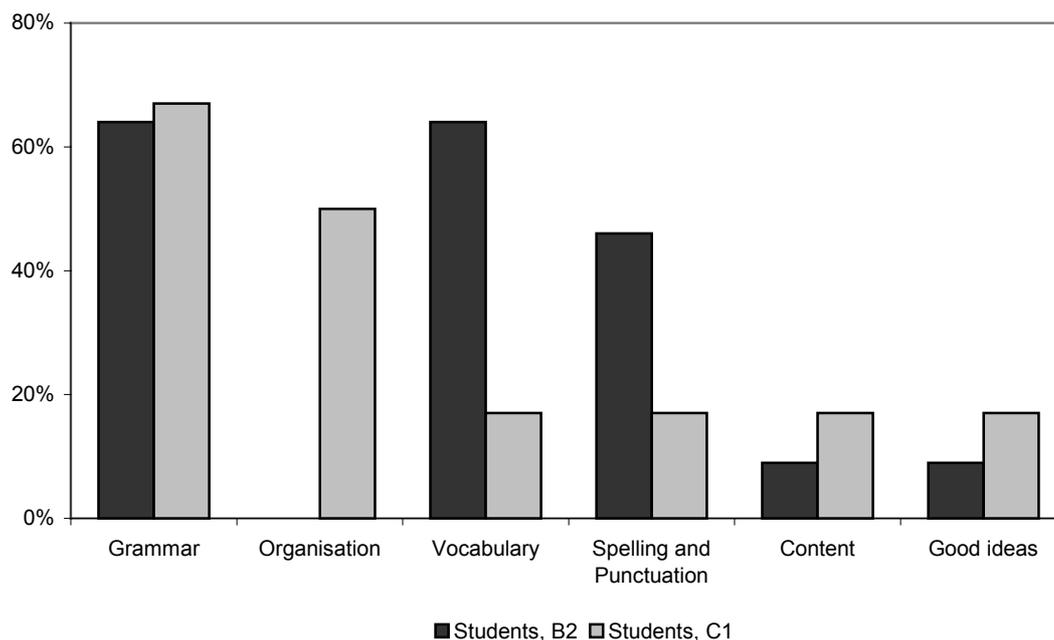


Figure 13. Comparison of the B2- and C1-level students' responses to Question 10.

Ranks 1 and 2 (1 – of high importance; 6 – of low importance); a more detailed distribution of the answers is provided in Appendix 9. As can be seen in the figure, the subjects ranked *grammar* as the most important aspect of academic writing. It is worth

noting that the values attributed to *grammar* were equally high in the B2-level sample (63%) and in the C1-level sample (67%). However, comparing the subjects' responses in other aspects of writing, significant differences between the two groups of writers could be noticed. It appeared that 63% of the B2-level subjects considered *vocabulary* of utmost importance in academic writing, whereas only 17% of the C1-level subjects attributed the highest significance to that feature. Almost half (45%) of the B2-level students ranked *spelling and punctuation* first and second, whereas only 17% of the C1-level subjects placed these aspects high in their rating.

As was only expected, *text organisation* was the area that brought in marked differences in the answers. None of the B2-level subjects considered *organisation* highly significant in academic writing, although 45% ranked it third in importance. In contrast, as many as 50% of the C1-level subjects attributed high significance to *text organisation*, and 33% of the students placed it third. Both *content knowledge* and *good ideas* received low scores from the students: for instance, only 9% of the B2-level subjects and 17% of the C1-level subjects placed these features first and second in importance.

In regard to Question 11 on how to improve the readability of texts, the C1-level subjects listed the following aspects: *linking devices* (65%), *paragraph structure* (54%), *grammatical accuracy* (36%), *sentence structure* (36%), *text layout* (36%) and *vocabulary* (27%). In addition, the C1-level students suggested writing in short and simple sentences, using active voice and focusing on the main purpose of writing. Although the differences between the sample groups were not significant, the B2-level students tended to concentrate more on the *surface-level aspects* of writing such as *grammatical accuracy* (50%), *vocabulary* (33%) and *paragraph structure* (33%). Besides that, the B2-level subjects mentioned *sentence structure* (25%), *short sentences* (25%) and *handwriting* (25%). It is important to note that while 17% of the B2-level respondents referred to

linking devices and suggested that *good ideas* were crucial to improving the readability of writing, none of the C1-level subjects suggested *content* or *good ideas* as factors of increasing readability. An unexpected observation was that none of the 23 subjects made any reference to *text overall organisation* or the *logical flow of ideas* as important characteristics of readable writing. This may be explained by the fact that the respondents identified the term ‘organisation’ with sentence and paragraph level organisation mostly. In some B2-level subjects’ responses, in turn, organising a text was reported to be a mechanical consideration mostly, for instance:

1. I would separate the paragraphs with a blank line. (B2)
2. With bad handwriting it would be better to type. (B2)

The English language teachers’ questionnaire (Appendix 7)

Sixteen English teachers completed the questionnaire distributed to them at a regular departmental meeting. The questionnaire was conducted on a voluntarily basis and half of the teachers responded to it anonymously. The subjects were provided as much time for their responses as they needed (15 minutes on average). Nearly half of the teachers answered all the questions and filled in the open-ended questions in adequate detail. Another half of the teachers provided sufficient response to Questions 2-4; however, they failed to cover Question 1 adequately.

Question 1 asked the teachers to rank the importance of certain language aspects in academic writing. Responding to this question, some teachers (30%) provided only the ranking of the aspects of writing without adding any further comments justifying their choice. Furthermore, half of the subjects used numbers 1-4 only, which resulted in some aspects sharing the ranks. This may be explained by the fact that the respondents found it difficult to prioritise the six aspects of writing listed.

The same question was asked from the student sample (see Appendix 6, Q10). A comparative analysis of the students’ and teachers’ responses is given in the following

pages (see Figures 14-15 and Table 3 below); the distribution of answers is presented in Appendix 9.

As Figure 14 reveals, the teachers' responses showed quite a significant division of opinion in terms of which aspects to focus on at different levels of language competence. In regard to the *B2-level subjects*, the combined totals of the first two ranks indicated that more than half (57%) of the teachers believed that *grammar* was critical in B2-level writing. Nearly half (44%) of the teachers considered *content* most important and 37% of

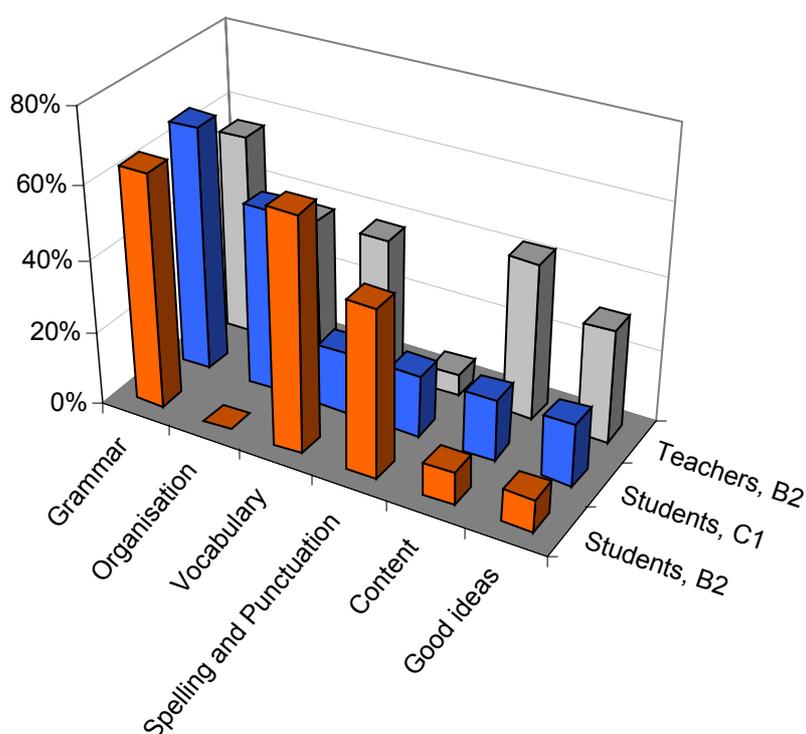


Figure 14. How important do you think the following aspects are in academic writing? A comparative overview of the responses provided by the B2-level students, the C1-level students and the English teachers (for B2-level writing).

them suggested that *vocabulary* and *organisation* were of equal relevance for B2-level writing. It should be pointed out, however, that only one teacher considered *text organisation* as the most important aspect of writing to be followed already in B2-level written discourse and placed it first in ranking.

Further analysis (see Figure 15) of the combined totals of the first two ranks indicated that even in *C1-level writing*, the teachers attributed far greater importance to *content* (82%), *vocabulary* (75%) and *grammar* (69%) than to overall *text organisation* (63%). However, while only half of the teachers attributed the highest priority to *text organisation*, none of them appeared to totally neglect this aspect of writing and none of the teachers

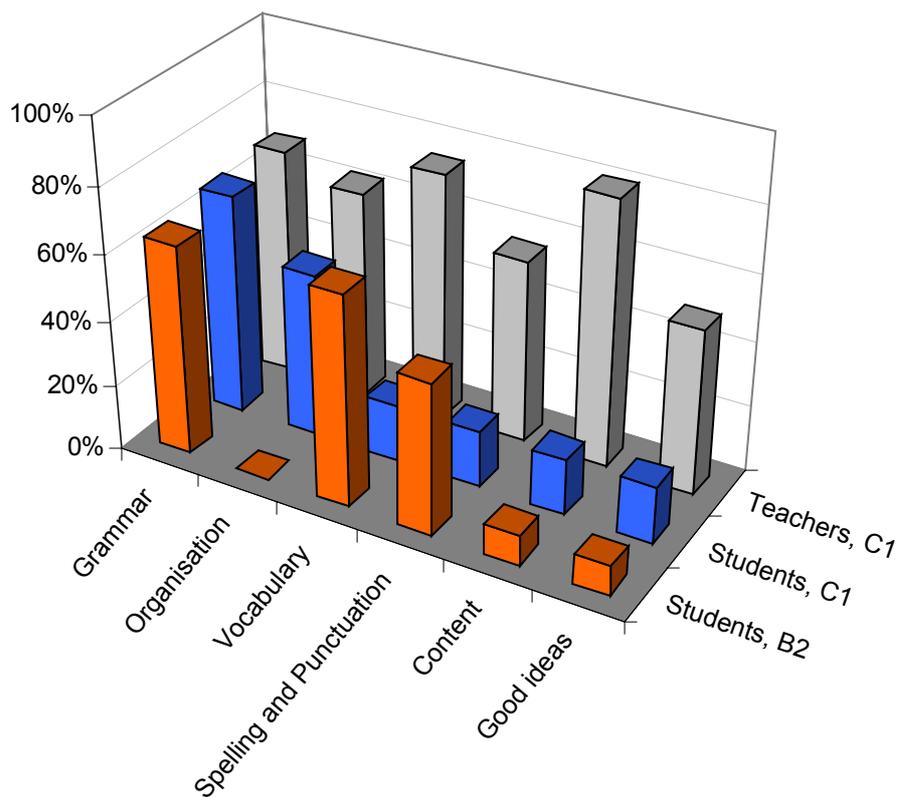


Figure 15. *How important do you think the following aspects are in academic writing? A comparative overview of the responses provided by the B2-level students, the C1-level students and the English teachers (for C1-level writers).*

placed it fifth or sixth.

In Question 2, the teachers were asked to define what text organisation was. Even though few respondents provided full definitions, most of them contributed to the following list of key notions: *logical expression and ordering of ideas, paragraphing, cohesion, coherence, clear and smooth flow, readability and appropriate style*. It is worth

mentioning that half of the teachers provided more than one key word for defining the term ‘text organisation’. Overall, the answers reflected the complexity of the issue: one teacher, for example, mentioned the concept of ‘narrative nature of the Western thought’, whereas another teacher identified text organisation directly with sentence structure.

In response to Question 3, the teachers were expected to indicate how *cohesion* can be achieved in writing. Some teachers (38%) addressed this issue by simply stating that writers should use *linking devices* (copying the question “*How can writers link ideas in texts?*” verbatim), whereas some teachers (31%) referred to *cohesive devices*. A relatively high proportion of the teachers (38%) suggested that *cohesion and coherence* could be achieved by *logical sequence and ordering of sentences, referring back to previous ideas and pronoun referencing*. Besides that, two teachers mentioned *punctuation* as an important means of linking ideas.

Question 4 asked the respondents to provide suggestions for how tertiary level students could improve the readability of their writing. With regard to this question, the English teachers tended to give rather conventional answers: 63% of the respondents suggested that students should do more *writing* and 44% of them believed that students should do more *reading*. In the same way, 31% of the teachers maintained that *paragraph writing* was essential, whereas 19% of them considered that *writing short essays* was important. As was expected, the teachers’ responses indicated also deeper *text-level* considerations of written discourse. In this respect, the teachers mentioned the concept of *written text analysis* (e.g., peer analysis, comparison of model texts, analysing the logic of target texts, etc.), *writing in different genres, problem-solution writing* and assigning *authentic tasks* on interesting topics.

Two issues were addressed in both the students’ and teachers’ questionnaires, namely: what aspects of writing should be considered most in academic discourse and how writers

could improve their written texts (see Appendix 6, Q10, Q11 and Appendix 7, Q1, Q4). A comparative analysis of the responses revealed certain differences in the subjects' priorities in English academic writing. Table 3 summarises information on the *combined totals* of Ranks 1-2 (1 – most important) in percentages (see also Appendix 9):

Table 3. *How important do you think the following aspects are in academic writing?*

	Teachers: B2	Students: B2	Teachers: C1	Students: C1
Grammatical accuracy	57	63	69	67
Spelling and punctuation	6	45	56	17
Subject content	44	9	82	17
Overall organisation	37	0	63	50
Vocabulary	37	63	75	17
Good ideas	32	9	50	17

When comparing the data, significant differences can be observed in the respondents' priorities in all other areas but *grammar*. Table 3 confirms that *grammatical accuracy* was considered equally important by all the respondents (the B2-level students, the C1-level students and the English language teachers). While the B2-level subjects placed higher value on *grammar* and *vocabulary*, the C1-level subjects prioritised *grammar* and *organisation*. The teachers maintained that B2-level writers would need to focus on *grammar* and *content*, whereas C1-level writers would need to concentrate on *content* and *vocabulary*. In brief, the findings suggest that even though the teachers considered all aspects of writing quite important to teach, they seemed to prioritise *grammar* and *lexis*.

As already mentioned, the teachers' responses were similar to both the B2- and C1-level subjects' views in that *grammatical accuracy* was an important consideration in tertiary level writing. With respect to that, 57% of the teachers rated competence in grammar first and second in B2-level writing and 69% of the teachers considered it equally important in C1-level writing. In the same way, 63% of the B2-level subjects and 67% of the C1-level subjects gave the highest scores to grammatical accuracy.

An unexpected result was that while the teachers' and students' opinions on *grammatical accuracy* differed only slightly, there were significant divisions in their views on other aspects of effective academic writing. It appeared that only 37% of the teachers maintained that *text organisation* was highly significant for B2-level writers, whereas 63% of the teachers believed that it was crucial for C1-level writers.

Further analysis indicated that *text organisation* was the aspect of writing that none of the B2-level subjects rated first or second, although 45% of them placed it third in importance. A noticeable difference was that knowledge of *text organisation* was considered highly valuable by a large number of the C1-level subjects; for instance, 50% of the students ranked *text organisation* first and second, and 33% of them placed it third in importance.

In comparison, the findings revealed that the aspects of writing that gained the highest ranking from the teachers (e.g., *content* and *good ideas*) did not receive sufficient response from the students. Furthermore, there were substantial differences in the B2- and C1-level subjects' answers. The B2-level students, for example, rated *sentence-level* features of writing (e.g., *vocabulary* and *spelling*) considerably more highly than their C1-level peers. The C1-level students, on the other hand, appeared to appreciate not only the linguistic competence of *grammar* and *lexis*, but also maintain focus on the *text-level features* of written discourse.

The above data confirm that both the teachers and the students considered the *linguistic competence* of English as the basis for effective academic writing. This may reflect the situation in tertiary level L2 instruction that has so far been concerned mostly with raising writers' linguistic competence rather than other language competences crucial to writing. Clearly, grammatical accuracy is of utmost importance in language acquisition; however, it is not sufficient for effective L2 written discourse.

Analysis of the subjects' writing in English

In the final stage of the research, written discourse analysis of the Estonian undergraduate students' essays was carried out to provide further evidence on what discursal problems Estonian writers may have in English writing. Another consideration of the analysis was to identify whether these difficulties were common to both levels (C1 and B2) of writers or whether they were more pronounced in B2-level writing.

The analysis examines student writing with focus on the underlying principles of Anglo-American text construction – text *organisation, argumentation and style*. The analysis is based on the undergraduate students' (levels B2 and C1) expository essays written under test conditions in the first EAP class. Besides that, the analysis reflects upon the academics' responses to the text-specific questions on English written discourse (see Appendix 5, Q7-Q18). As the sample groups were quite small in number, the statistics and examples given in the survey could mainly be considered for illustrative purposes.

The two proficiency groups (levels B2 and C1) of students were given a task to write on a prompt “How can we make the Internet more effective?”. Written text analysis revealed that the majority of the subjects had developed their essays at relevant length (the required minimum of 250 words), sustaining a fair level of adequate content. Overall, 91% of the 23 students managed to compose the essay within the given time limit (45 minutes). At the same time, half out of 11 C1-level students composed texts of up to 300 words and one C1-level writer produced a text of about 350 words. One B2-level subject failed to reach the minimum word requirement and produced a text of only about 200 words. The analysis of the students' essays covers the following discursal and rhetorical categories of a written text:

- the main idea and the writer's purpose;
- text organisation (the introduction, the body and the conclusion);

- paragraph organisation (topic sentences, supporting sentences, concluding sentences, etc.);
- text unity: cohesion and coherence (patterns of structure, cohesive devices, textual references, etc.);
- style and register (metadiscourse, hedging, variety of structures, etc.);
- communicative interaction (audience awareness, reader expectations, etc.);

The main idea and the writer's purpose

The overall purpose of the test essay was to inform, explain and even persuade the reader with adequately provided examples and evidence. With regard to that, a major shortcoming in the subjects' texts was their inability to express the purpose of writing clearly. In other words, in many cases, the writers failed to state what the main idea of their essay was.

It seems fair to assume that these deficient features were more characteristic of B2-level writing; however, they were fairly common in C1-level writing as well. The findings indicated that as many as 83% of the B2-level subjects and 64% of the C1-level subjects expressed their thoughts in a narrative style with minimal development of thought. Both the B2- and C1-level writers had included more than one main idea in the text and loaded the text with irrelevant information. A typical flaw in B2-level writing was that the purpose of the essay seemed to change throughout the text, making it difficult for the reader to follow. For example, although the writers attempted to convince the audience about their opinions in some parts of the essay, they often switched over to simple description and narration in other parts of the text. Even though C1-level writing involved more L2 textual patterns of thought and was, therefore, considerably more effective in establishing text-level unity, it was not overly successful at achieving the style for readability either.

Text organisation

The Estonian students' essays displayed typical text organisation problems of L2 writers. Tables 4-5 provide an overview of the whole text organisation in the students' essays, specifying the number of paragraphs in the texts (e.g., P1=Paragraph1), the number of sentences in each paragraph and the total number of sentences in the essay. The data indicate that almost half (48%) of the subjects used a distinct five-paragraph essay format and 17% of the writers applied a four-paragraph format. On the other hand, 17% of the subjects tended to overlook the conventional essay format, applying only its three basic components (the introduction, the body and the conclusion) to their texts. The maximum number of paragraphs in the subjects' texts was six (13%), whereas the minimum number of paragraphs was three (22%).

Table 4. *Whole text organisation in the B2-level sample essays.*

B2 sample	Introduction P1	P2	P3	P4	P5	Conclusion P6	Total No of sentences
1	7	10				3	20
2	2	3	3	2	3	1	14
3	3	10				2	15
4*	2	14				1	17
5	4	6	5	3		2	20
6	4	9				2	15
7	4	4	3	3		2	16
8	3	5	5	4		2	19
9	4	4	2			2	12
10	3	5	4			2	14
11	2	6	3	4		1	18
12	3	3	4	5		2	17
Average	3.4	6.6	2.4	1.8	0.3	1.8	16.4

To summarise the findings, quite a large proportion (67%) of the B2-level subjects designed their essays adequately in four (17%), five (42%) or even six (8%) paragraphs; however, a considerable number (33%) of the B2-level writers organised their texts in only three paragraphs. One B2-level writer devised the text in two paragraphs with a concluding sentence representing the third paragraph (see Table 4, Student No 4*). In contrast, the vast

majority (91%) of the C1-level students developed their texts in four (18%), five (55%) or six (18%) paragraphs. Although one C1-level writer managed to compose the text in three paragraphs, he failed to write the conclusion (see Table 5, Student No 9*).

Table 5. *Whole text organisation in the C1-level sample essays.*

C1 sample	Introduction P1	P 2	P3	P4	P5	Conclusion P6	Total No of sentences
1	3	5	5	3		3	16
2	3	3	3	2	2	3	16
3	5	7	4			3	19
4	4	4	4	3		1	16
5	2	4	4			4	14
6	3	6	4	4		3	20
7	2	3	5	3		3	16
8	4	3	1	2	2	1	13
9*	3	3	4			-	10
10	4	5	4	3		3	19
11	3	4	4	3		3	17
Average	3.3	4.3	3.8	2.1	0.4	2.5	16.0

As noted, a number of essays appeared to be unbalanced in structure. Firstly, a common design flaw in the texts was that they had very short introductions and/or conclusions. Furthermore, as most of the deficient texts were made up of only three paragraphs, these texts displayed a relatively large body composed of as many as ten sentences even. It appeared that while the average number of sentences in the first body paragraph of a B2-level text was as high as 6.6, the same figure for a C1-level text was 4.3.

At the same time, it is important to mention that the differences were revealed also in the formation of sentences and paragraphs. Even though Tables 4-5 suggest that the average number of sentences in the B2- and C1-level subjects' texts was similar (16.0-16.4), there appeared to be marked differences in the length and variety of sentences employed by the writers. While the C1-level writers designed the text with more complicated subordinate clauses with the average length of 15-25 words, the B2-level subjects constructed short isolated sentences of 10-15 words. These findings are significantly different from the data reported for Anglo-American L1 writing with an

average of 24.9 words in academic writing and 23.8 words in scientific writing (Peck MacDonald 1990, quoted in Camiciottoli 2003).

The analysis of the texts indicated that neither the B2- nor C1-level writers had sufficient knowledge of the text macrostructure in terms of where in the text the important ideas should be placed and how these ideas should be supported by details, examples and evidence. Although both the B2- and C1-level subjects' essays were quite similar in terms of building up the introduction, the body of the text and the conclusion, marked differences existed in establishing whole text unity. Clearly, these weaknesses were more pronounced in B2 writing.

Introduction

In the Anglo-American writing tradition, the introduction is expected to include a *thesis statement*, which reflects the content of the essay and prepares the reader for what will be discussed. Consequently, this statement should reveal the essay's purpose and convey the writer's focus. In addition to that, the introduction should briefly state the major subdivisions of the essay and provide possible solutions to the problems.

The most common design flaws of the Estonian students' texts were apparent already in the introduction. As many as 91% of the B2-level subjects and 64% of the C1-level subjects designed poor introductions. The analysis revealed that the writers were not successful in introducing the topic to the reader since they used ineffective initial sentences. For instance, two thirds of the B2-level subjects and one third of the C1-level subjects started their text with a universal or formulaic statement globally related to the topic:

1. The Internet is one of the best things that man has created. (B2)
2. The Internet has developed a lot. (B2)
3. The internet is the medium of today. (B2)
4. The popularity of the Internet has greatly increased over the past five or ten years. (C1)
5. Nowadays, the internet has a big role in our lives. (C1)

In some cases (17%), the students provided a long definition or explanation of the term ‘internet’ which, however, did not contribute to the purpose or quality of the introduction:

1. What is internet? Internet is the biggest world-wide network connecting most of the worlds computers together as a big happy family. (B2)
2. Probably most of us have heard the word ‘internet’ for today. Yes, it has something to do with computers. Actually internet is based on computers, but it did not and still does not evolve the same way as other technology because it is not physical and it does not have a center or base – instead it has global coverage and its growth is quite unpredictable. (C1)

A frequent problem was that the writers did not elaborate on their introductions fully.

In short, they were not able to state a claim, give background to the problem and offer a possible solution for it in a few sentences of the introduction. The findings in Tables 4-5 above show that 70% of the students formulated the introduction in 3-4 sentences as expected; in contrast, one B2-level subject composed the introduction in seven sentences and one C1-level subject wrote it in five sentences. It is worth noting that a nearly equal proportion (18-25%) of both level subjects developed their introduction in only two sentences.

As was already mentioned, most students failed to define the purpose of their writing clearly. Instead, 66% of the B2-level writers and 33% of the C1-level writers seemed to apply a strategy of copying the thesis statement from the essay prompt (“How can we make the Internet more effective?”):

1. The internet is being improved every day – how can we make it more effective? (B2)
2. How can we make the internet more effective? (B2)
3. So, a question should be arised, how can the Internet become more effective? (C1)

While the C1-level writers attempted to clarify the purpose of writing by a few additional sentences in the body paragraphs, the B2-level writers attributed no great significance to the proper statement of it. Moreover, even though half of the B2-level subjects and 73% of the C1-level writers offered sufficient background details for the problem, only one C1-level writer appeared to mention an appropriate solution to the problem already in the introduction of the text:

...So the only logical solution to increasing the Internet's efficiency is to raise the level of knowledge and whereabouts the users have.

Conclusion

Another design problem for many subjects was their inability to write an adequate conclusion which would stress the importance of the issue discussed and leave the impression of completeness on the reader. A common pitfall was writing too short and/or incomplete conclusions. Tables 4-5 above suggest that the conclusions in C1-level writing were far better developed than those in B2-level writing as quite a large proportion (73%) of the C1-level subjects managed to produce conclusions of sufficient length. A clearly noticeable problem in B2-level writing was that only one writer was able to construct the conclusion adequately in three sentences. In contrast, 67 % of the B2-level writers designed the conclusion in two sentences and 25% of them in only one sentence. An unexpected result was that a relatively high proportion (27%) of the C1-level subjects displayed inadequate knowledge of how to write conclusions. Thus, two writers had only one-sentence conclusions and one writer did not produce any conclusion at all. The inadequacy in writing the conclusion can be illustrated by the following examples:

1. More I use the internet in my everyday life, more effective the internet will become for me. (B2)
2. In conclusion, I would like to say that there isn't much to be done to make the Internet more efficient but there are some areas that could be improved in the future. (C1)

With regard to the overall development of the conclusion, no distinct differences could be identified between the two groups of subjects. Even though it was difficult for half of the writers to bring the discussion to a logical close, an equally high proportion of the students managed to propose a solution to the problem in their writing. In fact, 17% of the B2-level subjects and 37% of the C1-level subjects included a call for further action in their conclusion. However, the analysis revealed that in the case the writers had been able to propose a course of action or provide a solution to an issue, they had considerable difficulty in constructing the concluding sentence. This sentence is crucial to making a

reasonable final claim and leaving a strong impression on the reader, which the writers failed to do:

1. The main issue is that we need more computers and a good internet connection. If that is covered, then we have made the internet more effective already, because all the companies know that the internet is the future and they are trying to use it as much as they can. (B2)
2. To make the internet more effective, we must fight against the hackers in all possible ways. The fighting techniques may be technological or even moral. But that's only one reason why internet become unstable. (B2)
3. /.../ Thirdly, the Internet service providers should lower the prices and increase the speed of allowed bandwidth. (C1)

In addition to the above, several other problems in writing conclusions can be identified, namely: focussing on a point of minor importance (35%), summarising without synthesising the support and examples used in the text (35%), introducing a new idea or subtopic (18%) and ending with a rephrased main idea statement without any substantial changes (18%). The following examples illustrate how the writers introduced a new idea or subtopic in their conclusion:

1. As the internet becomes more effective, the viruses also become more effective and we have to think about improving the antivirus programmes. The viruses have halted many internet servers and because of that the internet efficiency is suffering. (B2)
2. To conclude, the area of using internet from elders to kids should develop. As well there are room for moving on in the area of communicating with different societies. (B2)
3. On the whole, making the internet more effective starts with improving the computers. Similarly, easy-to-use environment also achieves this. At the same time, internet 2 will introduce very high speed. (C1)

Paragraph organisation

Text analysis revealed another problematic area in the subjects' essays concerning *paragraph unity* and *paragraph development*. Similar to L2 writing in general, the most common paragraphing faults in the Estonian students' writing appeared to be *rambling paragraphs*, *artificial breaks*, *short paragraphs*, *unbalanced paragraphs* and *run-ons*. Long and confusing paragraphs, loaded with irrelevant details, were the most dominant flaws in 91% of the B2-level texts and 37% of the C1-level texts:

The internet provides us a lot of possibilities. In uncountable subjects/fields. All those possibilities are worked out to make a person's life more efficient, to help him/her to save time. Because as we know from the 19th century already "time is money". Most of the solutions are worked out for mainstream users. As there is a mainstream solution, there will be a wide range of users. The wider the users' "family" is, the more different people take part of the action. The biggest problem is that also criminal

or violent crowd take part. In the internet, they are called hackers, and they are smart enough to disturb some solutions work or even to shut some system down. That is uncomfortable from the mainstream point of view, and this is only one thing that extremely reduces systems efficiency. (A body paragraph from a B2-level text)

Apart from that, both the B2-level essays (75%) and the C1-level (28%) essays displayed numerous instances of overloaded *run-on paragraphs* with key points in the middle or even at the end of the paragraph. In addition, *artificial breaks* occurred in 25% of the B2-level texts. Obviously, in the revision stage, the B2-level writers had attempted to divide paragraphs that were too long mechanically, producing a new paragraph that lacked a topic sentence. Even though short paragraphs may also express emphatic statements, such paragraphs in B2-level writing were clear evidence of poor paragraphing skills.

The findings suggest that Estonian subjects lack understanding of the paragraph structuring role of the *controlling idea*, even though in some scientific texts the idea may not be explicitly stated. 25% of the B2-level subjects and 37% of the C1-level subjects applied the *inductive style* in their essays and placed what seemed to be a topic sentence close to the end of the paragraph. Half of the B2-level students attributed low significance to the topic sentence and placed it randomly in the text, whereas 25% of them did not provide it at all. In comparison, 37% of the C1-level writers, apparently with better knowledge of the Anglo-American writing tradition, produced paragraphs with conventionally placed topic sentences.

Text unity

First of all, written text analysis focused on what specialised patterns of text the Estonian students had adopted in their writing practices. In addition to that, it examined the basic lexicosemantic features such as *cohesive ties*, *lexical ties*, *pronoun references*, *repetition* and *parallelism*.

Patterns of structure

In general, two thirds of the C1-level subjects and one third of the B2-level subjects demonstrated sufficient skills and adequate lexis for *outlining, defining, explaining reasons and purposes, comparing and contrasting and drawing conclusions*. The number of those who were successful at *inferring, implying, speculating and verifying* was not as high as expected in the C1-level sample (45%) and quite low in the B2-level sample (25%). In many cases, explicit textual patterns were not used at all in texts.

The findings revealed the writers' little knowledge of the textual schemata, for example, Hoey's (1983) *problem-solution framework* that the students could have employed to develop their texts. In fact, as few as 36% of the C1-level students and only one B2-level student attempted to apply this framework; at the same time, the majority of these writers failed to include all the four 'obligatory' components (*situation-problem-solution-evaluation*) in the pattern.

Similarly, most Estonian subjects (87%) did not demonstrate explicit knowledge of the textual patterns of information structure such as *given-new, general-specific and theme-rheme*. The analysis of the subjects' texts showed little evidence of proper arrangement or efficient ordering of information in them. As many as 72% of the C1-level writers exhibited problems with the distribution of information which, in turn, had a negative effect on the coherence of their writing. For example, the writers often emphasised elements that were not supposed to be emphasised or made a particular element in a text thematic:

To make the Internet more effective, we must fight against the hackers in all possible ways. The fighting techniques may be technological or even moral. But that's only one reason why internet has become unstable. (B2)

Even though a large number (63%) of the C1-level essays displayed logical arrangement of information with emphasis placed at points of syntactic closure, 37% of the C1-level texts and 67% of the B2 texts gave evidence of poor information structure.

Clearly, the student writers displayed poor awareness of text development. For instance, 56% of the B2-level texts and 27% of the C1-level texts demonstrated a low proportion of ‘sequential progression’ which, according to Connor (1996), helps to develop the theme. Furthermore, their texts lacked ‘extended parallel progression’, which helps to bring the essay back to its main theme. This deficiency may be illustrated with the following B2-level extracts, which include irrelevant details and indulge in narration and circumlocution:

1. Obviously, the other noticeable problem is clever viruses, which are fighting their way through the internet. Similarly to spam, viruses are spreading powerfully and a huge amount of network resources must deal with virus-caused traffic jams. In general computer systems must be turned into more secure and foolproof systems.
2. Another field we can't pass is multimedia. In the area of video, media have been developing a lot. On contrast, when we look towards to vocal translating and understanding, there is still way to go. Translators have dream that one day we can speak in mother language and friend or business partner would understand us correctly.

Cohesive ties

Many of the common problems of L2 writers' connector usage turned out to be characteristic of the Estonian writers as well. The Estonian writers' essays displayed universal high-frequency textual patterns and conventional *cohesive ties* (also referred to as *transitional devices, conjunctive adverbs, adverbial conjunctions, etc.*) to support the logic of ideas in the text. Quite a large proportion (58%) of the B2-level writers and almost every (91%) C1-level writer showed the ability to create connections between sentences or groups of sentences inside the paragraph by using *micro-level signposts*. In contrast, only 17% of the B2-level subjects and a relatively low proportion (33%) of the C1-level subjects attributed great significance to *macro-level signposts* to show the relationship between the paragraphs and make clear where the logic of argument was leading. A

commonly occurring macro-level pattern in both B2 (33%) and C1 (27%) writing was the sequence of text development markers such as ‘*Firstly/Secondly/Thirdly/Finally*’ or ‘*First of all/Next/Then/Finally*’. Only a few C1-level writers demonstrated a greater structural and lexical variety in macro-level marking, for instance, using the ties such as ‘*To start with/Additionally/On the whole/ In conclusion*’ or ‘*To begin with/Moreover/In addition/On the whole*’, and similar others.

The micro-level connector usage is claimed to be sensitive to markedly non-native style (Lorentz 1999). Text analysis indicated that the typical flaws such as *the misuse, overuse* and *lack of cohesive links* were prominent also in the Estonian subjects’ writing. In several cases, the linguistically correct writing appeared to lack coherence and thus confused the reader. To illustrate the problems with connectives, the following sentences from student writing may be considered:

1. As because of the human nature, he wants comfort and exemptions from tedious activities, however, he has invented techniques to make every day life easier. (B2)
2. All the same time the internet has become an important part of our society, although improving our relationships most excellently improves the Internet. (C1)

Another apparent feature of non-native style concerned the frequency and preferences of connector usage. The analysis showed vivid lexicosemantic differences between B2- and C1-level writing in the use of such signal words. For instance, while the highest number of cohesive ties in a C1-level text was 18, the number in a B2-level text was 10. Although as many as half of the C1-level subjects lacked stylistic variety in their texts, this problem was considerably more pronounced in B2-level writing (91%).

Tables 6-7 demonstrate a direct correlation of preference and/or frequency of use of connective ties and English proficiency. The findings show that the B2-level subjects displayed little variation in the connector use and tended to employ mostly common, high-frequency connectors with a few all-purpose favourites dominating. This tendency may have derived from the lexical limitations that the B2-level subjects have in L2. The C1-

level subjects, on the other hand, appeared to mix both more challenging low-frequency patterns and common high-frequency connectors in their texts, for instance, ‘*In general/But/Hence/Naturally/Also/In contrast/By and large/Finally*’.

Table 6. *The high-frequency connectors characteristic of both the B2- and C1-level texts.*

Cohesive tie	B2 sample	C1 sample
For example	3	5
So	5	3
But	4	2
And	4	2
Also	3	2
Second(ly)	3	2
First(ly)	2	2
First of all	2	1
Finally	2	1
Then	2	1
To conclude	1	2

Table 7. *Connector use specific to C1-level writing.*

Cohesive tie	Frequency of use	Cohesive tie	Frequency of use
Thus	4	Drastically	1
However	3	Equally	1
In conclusion	3	Furthermore	1
Therefore	3	Hence	1
Thirdly	3	In addition	1
According to	2	In most cases	1
Clearly	2	In terms of	1
For instance	2	Lastly	1
Moreover	2	Naturally	1
On the whole	2	On the contrary	1
Again	1	On top of that	1
Although	1	Since	1
As a whole	1	To begin with	1
As soon as	1	To start with	1
By and large	1	What is more	1

With regard to connector use, the academic faculty members’ were provided with a list of 107 markers of different formality (see Appendix 5, Q7) and asked to decide which of the transitional devices they would prefer and which they would avoid in academic

writing. Table 8 provides a list of the cohesive ties that the academics most frequently opted for.

Table 8. *The academics' preferences for connector use.*

Cohesive tie	Frequency of use	Cohesive tie	Frequency of use
According to	10	As a result	6
Finally	9	As follows	6
However	9	Because	6
On the other hand	9	But	6
As	8	Due to	6
For example	8	In addition	6
Also	7	Including	6
Although	7	In theory	6
Instead	7	Otherwise	6
Nevertheless	7	Therefore	6
On the basis of	7	Thus	6
While	7		

In comparison with the students (see Tables 6-7 above), the academics displayed distinct differences in their choices of signalling words. Overall, only three connective ties such as *'for example'*, *'but'* and *'also'* were commonly represented in all the subjects' lists. The findings revealed some similarities between the academics' connector preferences and the C-level writers' use of transitional devices in their essays. For instance, both the academics and the C-level writers displayed signals such as *'according to'*, *'although'*, *'however'*, *'in addition'*, *'therefore'* and *'thus'*. It should be stressed, however, that this comparison is of relative value since the academics were presented with a full list of markers to choose from, whereas the students were expected to produce the connections in the process of writing on their own. A complete list of the cohesive ties that the undergraduate students employed in their essays is provided in Appendix 10. An overview of the academics' responses to connector use is given in Appendix 11.

A common non-native pattern reported by this research was the overuse of 'little' conjunctions, especially *'And'*, *'But'*, *'So'* and *'Also'* in sentence initial position which, in

turn, limited the use of synonymous markers. Even the academics were divided on how to use sentence initial conjunctions in academic texts (Q14): while 40% of the respondents claimed that they would ‘never’ employ such conjunctions, 60% of the respondents chose the answer ‘sometimes’ or ‘seldom’.

Table 6 shows that, on average, nearly each C1-level essay included a conjunction (0.8) in sentence-initial position; as was expected, B2-level writing displayed considerably more (1.3) of such conjunctions. A frequently occurring feature in B2-level writing (42%) was a substantial overuse of a causal conjunction ‘*because*’. In fact, none of the 23 sample essays displayed the synonymous forms of ‘*as*’, ‘*since*’ and ‘*for*’ in that function. Furthermore, in half of the B2-level texts ‘*Because*’ was employed as a typical sentence initial conjunction.

An important observation was that even though some (18%) more proficient C1-level writers managed to compose a coherent text without many explicit connectives, an equal number (18%) of the C1-level subjects tended to overuse the cohesive markers. Based on the data, as many as 50% of the C1-level subjects and 17% of the B2-level subjects can be reported to overuse logical connectors in L2 writing. A telling result was that as many as 28% of the C1-level writers started almost every sentence in their text with a connective tie. Here is an example to demonstrate the problem:

In terms of internet 2, it would be a great way to improve the speed of the internet. In the first place, the internet we use today was created some 30-40 years ago and was meant as a military network. As a result, it is too slow for today’s high needs for uploading and downloading data. In contrast, internet 2, which will be introduced in the near 10 years, will have insane download and upload rates compared to the ones we have now. By and large, implementing internet 2 could make internet more effective.

It might be argued that some more advanced writers use probably more connectors in English written discourse than in their L1 writing. A possible explanation for this may be that higher-level writers believe that by employing complicated lexis they can demonstrate their linguistic competence better. In comparison, while half of the C1-level subjects evidently used too many connectors, the B2-level subjects underused logical connectors or

employed the common sentence-initial markers. Another important finding was that 83% of the B2-level writers seemed to lack variety in connector use, apparently due to the limitations of their lexical repertoire. It should be stated, however, that the overuse of high-frequency patterns in the C1-level texts resulted in language simplification and did not contribute to the quality of these texts. For that reason, the differences in the subjects' language competence were not distinguishable.

In brief, text analysis showed that especially in B2 writing, linguistic marking of coherence relations improved text readability. A few (17%) examples of C1 writing, on the other hand, proved that explicit linguistic markers were not always necessary to have coherence in a text.

Lexical ties

Choice of *lexis* was another area of language which seemed to cause problems to student writers. Text analysis suggests that the lack of cohesion in student writing may be attributable not only to the non-use or misuse of connective words or incoherent ideas, but also to the absence of *content lexical ties*. Thus, most of the B2-level texts and a fairly high proportion (37%) of the C1-level texts displayed an apparent deficit of lexical ties, which in turn led to some misunderstanding of their written discourse. For example, to express a variety of meanings, most C1-level writers appeared to employ conventional lexical ties including *repetition of key words*, *synonyms* or *antonyms*. However, only a few of the C1-level subjects were able to paraphrase logical relations in a text lexically rather than use single devices such as conjunctions and adverbs. As the B2-level writers' vocabulary was more limited, they were considerably more disadvantaged in the choice of words to achieve the desired effect on the reader. A comparative analysis of the essays revealed that the B2-level subjects' texts exhibited less lexical variety and sophistication and included shorter words and fewer synonyms.

The findings indicate that the majority of the writers lacked a sufficient range of specialised vocabulary, for instance, they frequently needed an introductory phrase (e.g., *'in addition to that'*, *'with regard to'*, *'in view of this'*, etc.) in order to make clear the background viewpoint to the sentence or/and develop the idea accordingly. In addition to that, the subjects failed to use the text-structuring words such as *'issue'*, *'advantage'*, *'problem'*, *'reason'* and *'cause'* properly. The most commonly appearing structuring word in the subjects' texts was *'problem'* which was overused by 58% of the B2-level writers and 18% of the C1-level writers in the neutral meaning of *'issue'*, *'topic'*, *'aspect'* or *'question'*. Even the C1-level writers seemed to struggle with words of this nature. A similar finding has been reported by Kallas (1995) who says that "innocent words such as *'question'*, *'issue'*, *'theme'*, *'elements'*, *'factors'*, *'topics'* get transformed into problems" for Estonians.

Furthermore, although the C1-level subjects revealed increased awareness of the metaphorical qualities of language, their texts were still affected by L1 interference (e.g., *"The Internet has evolved quite enough /.../"*), direct translation (e.g., *"Again, international co-operation is needed to catch the people contaminating the web /.../"*) and lack of collocations (e.g., *"Secondly, the webpages, online databases and other features are easy to crash"*). In the same way, most B2-level writers indulged in some metaphorical excesses, which seemed to stem from their limited vocabulary (e.g., *"Human nature is cosy but rational"*), poor awareness of academic style (e.g., *"I hate spam"* or *"The reason is that Internet is full of different sorts of advertisements that people usually hate"*) or direct translation from L1 (e.g., *"Though it had a major advantage, and others to support it, it also had features that were from another opera"*, *"Which are the steps we have to make holding the internet in work?"*, etc.).

Pronoun references

The typical mistakes that the subjects' exhibited in the use of pronominals included *unclear pronoun referencing*, *broad pronoun referencing* and *faulty referencing*. Although these features contributed to the blurring of the meaning considerably, the cause of the problem was quite easy to locate. According to the analysis, a specific feature in almost one third of the B2-level texts was the inconsistency in the use of pronouns, expressed in a switching from one pronoun reference to another (e.g., *"Every system has its problems and none of them are as intelligent as human brain can be"*).

In this aspect, a number of differences can be reported between the B2- and C1-level writers' styles. For example, as can be seen in Tables 9-10, the B2-level students employed fewer selective demonstrative references (e.g., *'this'*, *'that'*, *'those'*, *'these'*) than the C1-level students and, as a result, they created less coherent texts.

Table 9. *Pronoun referencing in C1-level writing.*

C1 sample	this	these	that	those	it	they
1	2	-	-	-	3	1
2	3	-	-	-	10	1
3	3	2	-	-	5	3
4	-	-	-	-	5	1
5	2	-	-	3	3	3
6	3	-	-	-	1	3
7	2	1	1	-	8	3
8	-	-	-	-	8	4
9	-	-	2	-	5	2
10	2	1	2	3	5	1
11	1	-	1	-	4	2
Average	1.6	0.4	0.6	0.6	5.2	2.2

Table 10 Pronoun referencing in B2-level writing.

B2 sample	this	these	that	those	it	they
1	-	1	-	1	4	-
2	-	1	1	-	6	-
3	-	-	-	-	6	3
4	2	1	1	-	5	-
5	1	1	-	-	4	-
6	-	1	-	-	4	-
7	-	-	-	-	5	-
8	-	-	2	-	10	2
9	1	-	-	-	3	-
10	1	-	2	1	1	3
11	-	-	-	1	6	-
12	-	-	1	-	7	2
Average	0.4	0.4	0.6	0.3	5.1	0.8

Furthermore, text analysis revealed that students often made references to things which had been merely implied rather than explicitly stated in the text. In that sense, both groups' students tended to use unclear pronoun referencing in their writing, which often resulted in the obscured meaning:

For example, if you have a Pentium 200 on a motherboard, you change the settings to make the board think you are running the next extra fastest Pentium, you could try 233 MHz if you're brave. This works because the chip does not have an inherent speed. It accepts the speed given to it by the motherboard. If you are lucky this will work. If it doesn't work, you may have periodic errors and crashes. (C1)

In Questions 15-16 (see Appendix 5), the academics were asked to define the role of pronoun references in an academic text. An interesting finding was that 60% of the respondents claimed that the references such as '*this*' and '*it*' would not be appropriate in academic writing and should be replaced by concrete nouns. In that respect, the student writers seemed to share the academics' views. This false perception of referencing may have different reasons. The overuse of pronominals in the students' essays may reflect either an attempt to avoid repetition of vocabulary (the C1-level subjects) or deficiency of lexical devices (the B2-level subjects). At the same time, the absence or misuse of

pronominals definitely reveals the subjects' inadequate knowledge of the role of referencing in establishing coherence in writing.

Repetition of key words and phrases

An equally controversial issue in student writing was repetition. Most of all, the writers seemed to resort to this strategy when they did not have any more ideas to write about (both the B2- and C1-level subjects) or sufficient language tools for writing (mostly the B2-level subjects). However, even the advanced writers exhibited ignorance of the possibilities of using repetition for text organising purposes (see, e.g., *pronoun referencing* p.106; *parallelism* p. 111). Table 11 provides further information on how the key words, for example, were employed in the students' texts.

Table 11. *A comparative overview of the frequency of key words used in the B2- and C1-level texts.*

Key word or phrase	B2-level texts	C1-level texts	Synonymous words or phrases employed by the subjects	B2-level writers	C1-level writers
internet	73	85	web	1	10
			net	2	4
			webpage	2	4
			page	1	1
			website	5	2
			web environment		1
			network	1	
make the internet (more) effective	18	25	improve the efficiency of the net		1
			make the environment more friendly		1
			make the internet (more) efficient		1
			make the net more useful	1	
effective	23	24	raise accessibility		1
			efficiency	4	3
			accessible	1	2
			reliable		1
			efficient	1	1
			usable		1
			interesting		1
			useful	2	1
			effectively		1
			effectiveness	1	
valuable		1			

A surprising result was that the frequency of key words in B2- and C1-level writing was almost equal; however, the preference and application of these coherence-establishing devices was significantly different. The findings suggest that in comparison with the C1-level subjects, the B2-level subjects tended to resort to pronoun references (e.g., ‘*it*’) almost twice as often. This tendency can be illustrated by the following B2-level example:

Though it had a major advantage, and others to support it, it also had features that were from another opera.

The B2-level subjects displayed a considerably smaller variation in referring to key notions and had a marked preference for high-frequency items of lexis. Furthermore, while the B2-level writers employed key words or pronoun references to link sentences and paragraphs mostly, the majority (91%) of the C1-level students used these devices also to connect passages over a considerable distance in a text. In contrast, one C1-level writer was found to apply only a few key words but ample pronoun references in his text, which lowered the quality of the text noticeably:

The second distracting element of the internet is the overload of advertising and useless information. It is hard to stop this and is often the main way to profit for some companies. It would still be nice if it were considered as a value to have no advertising in some page.

Almost half of the B2-level subjects, apparently with quite a limited vocabulary for writing, tended to resort to restating strategies and repeat the same lexical item several times in adjacent clauses or sentences:

1. Nowadays the internet is very useful and the majority of people cannot even imagine their life without the internet.
2. To make the internet more effective we need more computers. Because there are people who doesn't have computer to connect to the internet. When we make the internet more effective there are people who doesn't care of it because they don't reach to the net. Therefore to make the internet more effective there must be more users.

However, unnecessary repetition of the meaning both within a sentence, paragraph boundaries and over longer passages of text was a common feature also in one third of the C1-level essays:

1. In terms of Internet 2, it would be a great way to improve the speed of the Internet.
2. Making the Internet more effective is not an easy task because I believe that the Internet is rather effective already.

3. The Internet as a whole is being managed by people all over the world who have made an effort to publish information on the Internet. Hence, the Internet depends on regular people and the logical solution to increasing the Internet's efficiency is to raise the level of knowledge the users have.

Some B2- and C1-level subjects, in contrast, attempted to limit repetition within the paragraph – they were quite reluctant to highlight the key words and resorted to excessive pronoun reference instead. This strategy may be illustrated by the following three examples:

1. The Internet is one of the best things that man has created. I would consider it as a miracle. And it has been improved since the beginning of it. At first, it was made for the military. It approved its efficiency quickly. Some men thought it could be used in normal peoples life too and they started developing the internet for everyday use. (B2)
2. In addition, one of our main customers in Estonia seems to be in trouble. They are downsizing their workforce and their orders are less than a quarter of what they used to be. (B2)
3. /.../ I believe it is rather effective already. Millions of people are using it to their advantage. Still, I think there are some ways of making it happen. (C1)

A sufficiently high number (46%) of the C1-level writers seemed to employ repetition in order to produce more effective texts. As Tables 11-12 illustrate, these writers displayed numerous synonymous constructions and repeated key words in different forms. However, unnecessary repetition appeared to abound also in the C1-level writers' texts who otherwise demonstrated a good mastery of language.

Table 12. *An overview of the frequency of key words used in the C1-level essays.*

C1 sample	'internet'	'make the internet more effective'	'effective'
1	7	3	2
2	6	4	4
3	2	-	-
4	6	5	4
5	10	4	4
6	11	2	2
7	9	1	2
8	8	2	-
9	8	1	-
10	3	1	2
11	5	2	3

Parallelism

Overall findings of the experimental study showed that the majority of the Estonian subjects, both the academics and the students, lacked knowledge of achieving *parallelism* in writing and applying parallel structures throughout the text. It was surprising to see that even the academic faculty members displayed little awareness of this textual feature of improving text quality, although parallelism is a typical feature of scientific texts (e.g., lists, headings, etc.).

Even though the B2-level subjects were more susceptible to using unparallel constructions, the linguistically more advanced C1-level students also demonstrated features of that nature:

1. Secondly, when we are trying to find some material, we are rarely given the right things by search engines. (B2)
2. If that is covered, then we have made the internet more effective already because all the companies know that the internet is the future and they are trying to use it as much as they can. (B2)
3. Thus, an highly effective and intelligent searching and indexing engine is needed. This kind of project would be very expensive to conduct. Thus, I think every interested country would need to contribute. (C1)
4. The Internet has changed how people communicate with each other and has created a new dimension in media. (C1)
5. Now, virtually everyone has access to the internet and information can be obtained very easily over long distances. (C1)

It can be noted that in the B2-level texts, the lack of parallelism seemed to be mostly attributable to poor knowledge of text unity principles. In the C1-level texts, on the other hand, the lack of parallelism appeared to be partly due also to the aspiration towards more varied linguistic structures.

Argumentation and style

The assumption was that Estonian students are not well acquainted with L2 argumentative writing due to the writing practices favoured at school. For this reason, the subjects were asked to produce an expository essay with the basic elements of problem-solution framework in it. As the essay was expected to be only partly argumentative, the

inherent elements of argumentation such as *claim*, *justification*, and *conclusion* were not likely to be fully elaborated. Nevertheless, the writers were expected to show their skills of *supporting claims*, *giving examples*, *providing evidence* and *suggesting solutions*.

Similarly to the findings of the previous contrastive studies (e.g., Connor 1996, Silva 1993), this research indicated that the uses and complexity of argumentation structures in the Estonian subjects' written texts differed from the L1 style in many areas. Text analysis revealed that the Estonian subjects less often stated and supported their opinion fully and they did less exemplifying in building up the text. A surprising finding was that even the C1-level writers were inclined to develop the text by simply restating their position, without supporting it with examples or evidence.

The assumption was that these features were considerably more pronounced in the B2-level subjects' essays; however, even the C1-level texts lacked clear focus and good development of ideas. Instead, a fairly high proportion of texts displayed a sequence of linguistically correct individual sentences with minimal or no interrelations between them. In addition to that, 67% of the B2-level essays and 37% of the C1-level texts were quite impersonal in nature and did not express the writers' intentions effectively.

Another common flaw was that the texts included a lot of narration, general descriptions and global statements instead of stating problems and expressing opinions. In many cases, the B2-level subjects had treated one point of opinion more thoroughly in their essays and neglected the other(s) which, in turn, produced unbalanced texts. In summary, only a few C1-level writers appeared to challenge the reader and develop an argument further, for instance:

Making the Internet more effective is not an easy task because I believe that the Internet is rather effective already.

Style

The failure to achieve an appropriate *style* for the purpose of writing was the most common pitfall in both B2- and C1-level writing. Indeed, as text analysis indicated, the Estonian writers expressed their own views rather than developed an academic view. Another typical non-native feature in the essays was the use of the overly impersonal style and the failure to signal how strongly the writer believed in the ideas expressed in the text. Based on the findings, the most vivid weaknesses in style in student writing can be reported as follows: *poor variety of structures, wordiness, register-mixing, inability to achieve the appropriate level of formality and lack of metadiscoursal devices.*

The Estonian writers failed to employ a *variety of structures* to achieve the simple, clear and concise style of effective academic writing. The tendency to use only a restricted set of structural choices was revealed also in the academics' responses to Questions 10-12 (see Appendix 5). A significant number (80%) of the writers reported that they applied a standard framework and a universal set of language constructions to all their written articles. The answers were divided in terms of what sentence structures the academics preferred. While 40% of the academics attributed greater significance to *short sentences*, 30% of the respondents opted for *long complex sentences* and 30% of them recognised the *combination of short and long sentences*. It is worth mentioning that 60% of the respondents maintained that in comparison with content, linguistic variety was not crucial in academic writing.

As regards variety of structures, the study showed significant distinctions between the two sample groups of students. The interference of the Estonian relatively free word order and impersonal phrase patterns was more evident in B2-level writing. Most B2-level writers avoided complex sentences and resorted to simple sentences composed of one clause or several clauses joined by coordinating conjunctions. Clearly, some B2-level

writers lacked adequate linguistic means to construct complex sentences and therefore, they failed in expressing the meaning adequately:

I also pay my bills using the internet. It's very comfortable. Because I don't have to use cash to pay bills in a bank or in a post-office. I use the internet to read programming online manuals. Then I don't have to order a book from America. It costs much.

Quite a number of the C1-level writers, on the other hand, produced *overloaded* and *over-complex sentences* with minimal cohesive devices to achieve coherence in them:

1. /.../Hence a lot of effort will have to go to the expansion of the quality and choices that the regular schools provide in the field of technology as a rule you cannot teach something effectively without giving practical experience.
2. What is more, the programmers and webdesigners should try to develop only basic and simple things due to a lot of people not desiring to deal with packets, TCP/IP and so on.

An interesting feature was that even though 67% of the B2-level texts were compiled in short, isolated sentences, almost each B2-level text contained at least one stringy statement:

1. For that search engines are done, for example 'Google', but they still have some drawbacks – they don't search the information like human would do – they search by the text, not by the meaning of the text, so in this category we have to work.
2. In my opinion, these engines are not absolutely efficient and good and the situation might be better if we could create a centralised database, one and only for the whole internet, that contained the majority of documents or documentation.

A common strategy among the B2-level writers with such over-complex sentences was to break the sentence into smaller units by simply applying punctuation. Therefore, in some texts, no real logical relationship in a string of sentences could be established:

The internet is available for nearly everyone, but there are places where only the computer is not enough. For example, rural areas, where are no telephone lines, no connection either. Talking about connection then network spreads mainly by telephone lines. There are also wireless connections and satellites, but these are very expensive ways.

The findings indicated that the Estonian writers were prone to *register-mixing* – from formal to informal, personal to impersonal and technical to jargon and even slang. It appeared to be quite difficult for the writers to express the logic of the thought in the logic of the sentence or text unit. A noticeable distinction was that, while in B2-level writing, stylistic mixing appeared already at the sentence level of the text, in C1-level writing, it

was considerably more evident in concurrent sentences at the paragraph and whole text levels. The following is a good example of the mixed framework applied in most C1-level writing:

- Paragraph 1: ‘*people*’ + active constructions; ‘*their jobs*’ + passive constructions;
- Paragraph 2: ‘*we*’ + active constructions; ‘*fears*’ + passive constructions;
- Paragraph 3: ‘*features*’ + passive constructions; ‘*we*’ + active constructions;
- Paragraph 4: ‘*I*’ + speech marker; ‘*web pages*’ + passive constructions; ‘*we*’ + active constructions;
- Paragraph 5: ‘*people*’ + active constructions; ‘*we*’ + active constructions;
- Paragraph 6: ‘*I*’ + speech marker; ‘*people*’ + active constructions; ‘*we*’ + active constructions.

In one sense, the writers seemed to employ strong lexical signals with active verb tenses (e.g., ‘*I think*’, ‘*I need to be sure*’, etc.); in another way, they used a lot of *hedging* and *passive constructions*. This discrepancy may be explained by the fact that more advanced writers have been exposed to a wider variety of L2 written and spoken styles than their lower-level peers.

Many literacy problems in the subjects’ writing can be reported to stem from the lack of familiarity with explicit, reduced-content and text-based language of written discourse. The reason for that may lie in the fact that in the 1990s, preference was given at Estonian schools to the communicative teaching of English with the main focus on the *spoken language* as opposed to text-based teaching of the *written language*. This may also explain the subjects’ marked tendency to write as they speak.

Especially the B2-level subjects seemed to lack knowledge of the properties of oral and written languages and did not differentiate between the styles of those two modes. The students’ texts displayed a high occurrence of *sentence fragments* and *speech markers* characteristic of the spoken mode, for instance:

1. The internet – the medium of today.
2. Many of the everyday doing can be done over the internet. Like paying bills, ordering products, watching weather forecast and lot more.
3. For example, in rural areas where are no telephone lines, so no connections either.
4. Everything was sure different – right?
5. First, stop the spammers!
6. This is the main point, but isn’t it going to be disturbing? It’s dilemma!
7. Isn’t the Internet already effective? (The first sentence in a B2-level essay)
8. But the problem is if the Internet really helps people? Do we find it useful and effective?

As evidence shows, even the C1-level texts contained explicit signals of spoken rather than written style:

1. Well, in terms of engineering /.../
2. Now, as regards /.../
3. Thirdly, I would like to point out /.../
4. In conclusion, I would like to say that /.../

In the light of this, it is important to mention that only one C1-level writer managed to develop his text without a characteristic pattern of the oral presentation style such as “*I would like to say/point out/mention that*”.

Another feature, more characteristic of the B2-level essays (67%) than of the C1-level texts (28%), was the *verbose narrating style* loaded with irrelevant detail, for instance:

1. What is the Internet? Internet is the biggest world-wide network connecting most of the worlds computers together as a big happy family. But I must mention that not all children or parents are happy and friendly. Some of them become violent, some unhappy and depressive. Some of us exploit others in his/her own interests. The same situations and aspects take place in the “internet family”. So, how should we treat the internet in order to take the maximum profit out of it?
2. Another field we can’t pass is multimedia. In the area of video, media have been developing a lot. On contrast, we look towards to vocal translating and understanding, there is still way to go. Translators have dream that one day we can speak in mother language and friend or business partner.

However, the wordy expressions frequently occurred in C1-level written discourse as well:

1. In terms of internet 2, it would be a great way to improve the speed of the internet.
2. According to the author, other similar program where high tech is used to stop terrorists, are developed throughout USA.

In addition to that, both B2- and C1-level writing exhibited the unmotivated use of ‘*it*’ and ‘*there*’ constructions. The following ‘*there*’ constructions, repeated several times in the essays, were representative of high-level C1 writing:

1. However, because of the popularity of the internet, *there are* many shortcomings /.../
2. To start with, since *there is* so much data on the Internet /.../
3. To conclude, *there are* ways to make the Internet more effective /.../

Metadiscourse

Text analysis confirmed that the subjects' awareness of *metadiscourse* was scarce. This was evidenced by relatively little textual and interpersonal metalanguage the writers employed for organising the text and orientating the reader. The prevalent type of metatext in the subjects' essays was *connectors*; however, the variety and frequency of such textual features was quite low (see also *cohesive ties* p. 99). In other words, the writers appeared to lack knowledge about how to use the metatextual devices such as *hedges*, *certainty markers*, *attributors*, *attitude markers* and *commentary* to achieve the desired result (see also Appendix 3).

Hedging was a discursual feature that exhibited a level of frequency much lower than many other linguistic features in the texts. The absence or poor presentation of hedging in the essays may be attributed to the subjects' linguistic and/or stylistic deficiencies of the Anglo-American writing conventions. Text analysis confirmed that the occurrence of intentional hedges in the B2-level subjects' writing was quite low, whereas in the C1-level subjects' writing it was much more dominant. However, while the C1-level students demonstrated some hedging behaviour in one sentence, they stated their opinions with less hesitation in another. In applying hedges, the writers did not distinguish between the different roles of hedging such as *signalling distance*, *avoiding absolute statements* or *being more precise* in reporting facts and results. Absolute statements, for instance, were very common in the C1-level subjects' texts:

1. It goes without saying that a critic gives an opinion on the product or in this case a web solution.
2. Nobody must underrate their part in the development process.
3. In general, I need to be sure whether the information is correct in the web.

Instead of employing the expressions that would convey indirectness and non-finality, and express greater delicacy of meaning (e.g., '*this would suggest*', '*it seems reasonable*', '*it might be the case*', '*one could say that*' etc.), the writers used hedges mostly to apply

positive *politeness* and achieve *formality*. The following sentences illustrate the most typical patterns of the C-level texts:

1. Furthermore, people should be taught more actively how to defend their computers.
2. However, because of the popularity of the Internet, there are many shortcomings which would need to be solved.
3. The Internet providers should lower the prices and increase the speed of allowed bandwidth.
4. The Internet could be more useful, if it contained only information without spam, which makes surfing on the net more difficult.
5. One of the future fears is that the growing number of spam letters would finally make the Internet unusable.

In contrast to the C1-level writers, two thirds of the B2-level subjects tended to write in an *unhedged* fashion:

1. If we want to live in the internet and put all our doings there, then we must have full time access. I think that we must apply computers everywhere: schools, kindergartens, hospitals, etc.
2. I believe that in year 2014 we don't have to go outside the house because we can do everything with out computer.
3. For sure, the number of computer users is growing from day to day.

Even though some of the writers attempted to use *modal verbs* and *passive constructions*, they tended to favour the *informal style* of writing. An interesting finding with the B2-level subjects was that some of them used more hedges and were more cautious about their feelings than could be expected based on their linguistic competence. Here are two examples to illustrate this:

1. Obviously, the other noticeable problem might be clever viruses, which are fighting their way through the Internet.
2. The situation might be a bit better, if a centralised data could be created that contained the majority of documents spreaded in the Internet.

Quite significant differences between the two groups of students emerged in the use of *passive constructions*. While the average number of passive constructions in a B2-level text was only 1.4, the number in a C1-level text was 4.8. In the same way, while only one third of the B2-level writers used more than two passive constructions in their text, a fair proportion (60%) of the C1-level students employed 4-6 such constructions. An expected finding, however, was that although the C1-level texts contained a lot of impersonal passive constructions, these devices were not used for proper hedging. An obvious

explanation for that may be that the students considered the use of passive constructions an inherent feature of the sophisticated manner of writing. Another explanation may be that undergraduate students as novice academic writers were not prepared to express their ideas adequately yet.

In Question 8 (see Appendix 5), the academics were provided with a list of metadiscoursal devices (e.g., *modals*, *adverbs*, *passive constructions*, etc.) and asked to choose which of these they would employ in their articles. The expected result was that 80% of the academics preferred passive forms such as '*it can be imagined*' or '*substances have been analysed*' to active constructions. Only one academic considered excessive passive constructions unnecessary in academic writing. However, further investigation into the findings revealed that the respondents were not consistent in their answers. For example, the academics did not differentiate between *markers of commitment* and those of *avoidance*. Thus, 50% of the academics reported preference towards *commitment*, 20% of them reported preference towards *hedging*, and 30% of them preferred neither of these. The academics seemed to select *modality markers* and *hedges* quite randomly, mixing those of avoiding commitment with those of expressing commitment. For example, it appeared that one third of the subjects questioned considered phrases such as '*from my point of view*', '*it seems to me*' and '*fortunately*' acceptable in scientific writing.

Hedging and *modality* can be treated as interrelated concepts of language use. As appeared from the present research, the use of different shades of modality posed considerable problems to the Estonian writers. In response to Question 8 (see Appendix 5), the academics attributed greater significance to the more tentative modality markers ranking them in the following order: '*could*' (100%), '*should*' (90%) and '*would*' (70%). In their essays, the students demonstrated little use of the modality markers and expressed their ideas and opinions quite explicitly. In addition to that, the findings showed a

remarkable difference in the total frequency and choice of modality markers employed. The most frequently used modals in B2-level writing were ‘*can*’, ‘*must*’ and ‘*should*’, whereas in C1-level writing the most preferred modals were ‘*would*’ and ‘*could*’. While some B2-level writers did not use any modals at all, some writers used them extensively; for example, there were numerous instances of ‘*can*’ (9 cases), ‘*must*’ (9 cases) and ‘*should*’ (4 cases) in one B2-level text.

As can be seen from the findings above, considerable variation occurred in the subjects’ preferences for modality markers. While there seemed to be some overlapping in the choices between the academics and the C1-level writers who tended to opt for *tentative* modality markers (e.g., ‘*would*’ and ‘*could*’), no significant similarity appeared in the choices between the B2-level writers and the other two groups of subjects. The findings indicated that most B2-level students preferred the markers that would convey *directness* (e.g., ‘*can*’, ‘*must*’, etc.).

Most noticeable was the use of *adverbs of certainty and attitude markers* (e.g., ‘*drastically*’, ‘*particularly*’, ‘*clearly*’, ‘*sadly*’ etc.) in C1-level writing; in contrast, they were not significant in B2-level writing. Both groups’ writers used relatively few common adjectives (e.g., ‘*certain*’, ‘*possible*’, etc.) and nouns (e.g., ‘*idea*’, ‘*possibility*’, etc.) for interpersonal metadiscourse. An unexpected finding was that the majority of the subjects did not include *commentary* in their texts. B2-level writing revealed another distinct feature that the students failed to employ the words expressing *tone of statements* such as ‘*it is clear*’, ‘*obviously*’, and similar others. Some C1-level writers attempted to use the above devices in their writing, but did it ineffectively:

1. Sadly, doing all this would require billions of dollars.
2. I must mention that it’s not a bad idea to add more memory to the computers.

The present study showed that 58% of the B2-level subjects frequently produced unintentionally *vague* and *ambiguous* sentences that seemed to distort meanings and

demonstrated lack of linguistic competence. To illustrate this, three B2-level examples are provided here:

1. Artificial intelligence refers to computer or another machine which solves problems that needs intelligence, but they can resolve certain and specific functions.
2. There are some people who are anxious to get the important information what is not for the foreign eyes like our bank passwords, private conversations and so no.
3. People travel for various purposes: somebody has to visit foreign countries to do his work, somebody simply spend his or her holydays in such a way, but number of language learners also arrive to bus and railway station, sea and airport.

Communicative interaction

The most important thing regarding *readable* academic writing seems to be that the *audience* is orientated properly. Guiding the reader along the line of development of ideas appeared to be quite a difficult task for the Estonian writers. One reason for that, it can be assumed, was the writers' inability to apply the structural principles of text organisation in their writing. As a result, the students were not successful in communicating their ideas to the reader.

The sample essays were supposed to be written not only for the teacher, but also for the peers in the field of engineering and information technology. Therefore, the students had certain reader expectations to adhere to. However, as some writers seemed to overlook the issues of the audience in text construction, they produced essays that lacked both syntactic redundancy (e.g., cohesive ties, pronoun references, etc.) and semantic redundancy (i.e., based on the reader's prior knowledge). It appeared that only a few C1-level writers managed to include relevant technical detail in their texts thus demonstrating their reader awareness. In contrast to that, most of the subjects' essays were full of generalisations and conventional statements.

As regards the style for readability, an interesting finding was that the B2-level essays exhibited more interactive features of the spoken mode (e.g. *rhetorical questions*, *exclamations*, etc.) and, therefore, seemed to be more communicative. For example, as

many as 70% of the B2-level writers posed a rhetorical question in their texts, 40% of the B2-level subjects used two or three questions in their writing and 30% of the students included even exclamations in their academic essays. The findings are likely to indicate that lower-level writers may find it easier to develop the argument in the text after having posed a rhetorical question first. However, in their essays, the B2-level subjects tended to fail in providing the answers to the question(s) stated. An expected result was that only two C1-level writers employed this strategy of informal interaction not acceptable in academic writing. The following extracts demonstrate how *questions* and *exclamations* were presented in the subjects' texts:

1. What is Internet? It is /.../ (B2)
2. Time is money! (B2)
3. The question is how should we treat the Internet in order to take the maximum profit out of it? (B2)
4. The Internet is being improved every day, but how can we make it more effective? (B2)
5. When it comes under question, how often we are using internet, we should ask how often it is possible? (B2)
6. Still, we must ask ourselves, how can we make the internet more effective? (C1)
7. So, a question should be arised, how can the Internet become more effective? (C1)

It should be stressed that even though the B-level texts appeared to be more communicative in nature, they were not written in the style acceptable for English academic writing. In the words of Kaplan (1987), "requests for information are less common in written language than in many spoken genres". A surprising result was that although 90% of the academics (see Appendix 5, Q8.) declared that they would not express their ideas in the form of questions in academic writing, one academic considered it quite acceptable.

As mentioned earlier, the underlying concept of reader expectation is most immediately evident at the level of largest units of discourse. Text analysis indicated, however, that the Estonian writers had considerable difficulty in organising their texts. As a result, it was problematic for the majority of writers to achieve the effective academic style.

CHAPTER III: DISCUSSION

The present discussion will provide an overview of the research issues explored in the empirical study at the Tallinn University of Technology and analyse the data received from the sample groups of subjects (the academic faculty members, the B2-level undergraduate students, the C1-level undergraduate students and the English language teachers). Based on the findings, the discussion addresses the most fundamental rhetorical and cross-cultural aspects of the Anglo-American academic writing tradition with focus on *text organisation*, *argumentation* and *style*. In line with this, the discussion attempts to highlight the implications and relevance of this research to the teaching practice in English academic writing courses in Estonia.

Reflecting on the role of writing in English for their academic success, both the academics and the undergraduate students maintained that writing was a crucial skill for an engineer or a scientist in international communication. An interesting observation was that the C1-level subjects declared to have more concerns with their writing than the B2-level subjects did. This may be explained by the assumption that more advanced students value the importance of writing much more highly (Johns 1993). Another likely reason for the students' concern is that more proficient writers "develop an increased sensitivity to audience and generally become more aware of their limitations in written communication" (Hyland 1997: 7). The main incentive for effective L2 writing is certainly the growing role of English as an international language of the scientific community:

.../ the fact that English now occupies an overwhelmingly predominant role in the international world of scholarship and research .../ entails that the coming generation of the world's researchers and scholars need – with relatively few exceptions in the arts and humanities – to have more than adequate professional skill in the English language if that generation is to make its way without linguistic disadvantage in the chosen world. (Swales 1990: 10)

The overall findings revealed that the Estonian academic writers do not have adequate writing skills to communicate their research to the international audience at the desired level. In this respect, the Estonian subjects confirmed Winsor's (1996: 1) argument that

engineers believe “rhetoric does not play an important role in technical writing” since they are “demonstrating self-evident data rather than persuading audiences”. Even these subjects who seemed to perceive the role of rhetoric in effective communication of knowledge tended to focus their attention largely on the surface matters of the written text.

Earlier studies on L2 writing (e.g., Riley 1996, Ventola 1996) have demonstrated similar results with higher priority given by writers to *grammar* as opposed to other aspects of language. This is not surprising, since non-native writers tend to identify grammar with the written form of the language and structure and composition with the unit of the sentence. Similarly, most Estonian subjects perceived effective writing as a matter of designing grammatically correct sentences. This was evidenced by a substantial proportion (60-88%) of answers ranking grammatical accuracy as the most fundamental aspect in effective writing. The academics, when discussing their difficulty in writing, rarely went beyond *syntax*, *vocabulary* and *grammar*. In the same way, the B2-level students attributed higher value to *grammar* and *vocabulary*, whereas the C1-level subjects prioritised *grammar* and *text organisation*. Although the English language teachers recognised all aspects of writing in producing high quality texts, they appeared to favour *grammar* and *content* for B2-level writing and *grammar* and *vocabulary* for C1-level writing.

Judging from the subjects’ responses, writing seems to be a controversial issue in tertiary level L2 instruction in Estonia. Obviously, due to time and administrative constraints in EAP courses, students and teachers cannot reflect upon the aspects of text-level rhetoric adequately. Even if emphasis may be placed during the course on topics such as cohesion and coherence, connectors and strategies, the main focus often remains on grammatical accuracy and lexical appropriacy. This fact alone may account for the difficulty Estonian academic writers encounter in creating quality texts, as according to Mauranen (1996: 199), “there are /.../ problems which only arise when a text is viewed as

continuous discourse, because in some texts each sentence taken separately seems to be acceptable, even if the whole does not seem satisfactory”.

In short, the data received from the subjects fully confirms the hypothesis that Estonian writers consider the mastery of grammar and lexis the most fundamental aspects of English written discourse. In addition to that, responses to the teachers’ questionnaire clearly indicated that teachers prefer to focus on surface level aspects of writing. This evidence seems to prove the hypothesis that text-level aspects of writing are not adequately addressed in tertiary level English language instruction.

More importantly, the main hypothesis of this research was that Estonian academic writers may have considerable deficits in creating coherent texts since they lack discorsal and sociocultural competences in English written discourse. Although some grammarians assert that students must master the language forms before aiming at fluency and style, a number of writing scholars (e.g., Grobe 1981, Shaugnessy 1977, quoted in Pilus 1993) have discovered that increased syntactic maturity does not mean increased writing quality. This notion is also supported by Spack (1988: 30), who believes that L2 writers’ difficulty with academic writing “may not lie in a lack of [linguistic] ability but rather in the social and cultural factors that influence composing”. In the same way, Widdowson (1979: 118) states that “communication only takes place when we make use of sentences to perform a variety of different acts of essentially social nature”.

The Estonian subjects’ responses to the questionnaires were quite revealing. Although two thirds of the academic faculty members claimed to have no difficulty with establishing *text overall organisation*, an equal number of them reported problems with Anglo-American publishing conventions. Moreover, a comparative analysis of the B2- and C1-level students’ answers exhibited striking differences in their perceptions of English *text-level rhetoric*. It appeared that although nearly half of the B2-level students ranked *text*

organisation third in importance, none of them attributed the highest significance to it. In contrast, half of the C1-level students rated text organisation very highly and one third of them placed it third in importance.

A telling result was that in terms of text quality, even the C1-level writers mentioned only a few discursal aspects such as *linking devices* (65%) and *paragraph structure* (54%). In fact, none of them mentioned text overall organisation or the logical flow of ideas as a means of improving the readability of the written text. As mentioned above, the explanation for that may be that the subjects' main focus was on word, sentence or paragraph level aspects of writing which, however, is not sufficient for producing a coherent text. In the words of John and Paz (2004: 1), writers should first be able to discover the relationships among the ideas of the text and "the organizational scaffolding upon which the text content is constructed".

Another unexpected result was the marked difference between the teachers' and students' views on all aspects of writing but grammar. In brief, the teachers appeared to express more concern about the linguistic aspects of writing than the textual aspects of it. The fact that only 38% of the teachers found awareness of text organising principles highly important for B2-level writers may indicate that the teachers believed that lower level students would need to master the grammatical forms of L2 first to be able to write the text. The teachers' preferences for C1-level writers were distinctively different. It is worth mentioning, however, that though a substantial number (62%) of the teachers considered knowledge of *text organisation* highly important for C1-level writers, the teachers attributed far greater importance to *content* (81%), *vocabulary* (75%) and *grammar* (69%) than to the *organisation of ideas*.

The findings showed that most Estonian subjects (both expert and novice writers) identified their difficulty in writing exclusively with lack of grammar and vocabulary and

only a few of them referred to the inadequate knowledge of rhetoric. Clearly, the low rating attributed by the subjects to cohesion, coherence and text unity may indicate that the writers were not aware of the significance of these features in effective written discourse. Thus, the academics recognised mostly the scientific content and the surface level aspects of writing. The B2-level students concentrated mainly on the surface-level aspects of writing, whereas the C1-level students managed to focus also on the text-level principles of composing. As was expected, the teachers highlighted besides the linguistic aspects of text composing also certain features of text-level rhetoric such as cohesion, coherence, text unity and some others.

The relatively low rankings attributed by the subjects to the discorsal features of writing may be explained by several reasons. As noted above, writing is perceived by students as the most problematic aspect of English and competence in writing is identified with the linguistic competence of grammar and lexis. This confirms the argument that linguistic competence is considered as the most fundamental aspect of L2 writing. On the other hand, there is substantial evidence to argue that Estonian writers are not sufficiently knowledgeable about the cross-cultural differences of writing and the underlying principles of the Anglo-American writing tradition. In fact, the present study proves that L1 interference is the problem which occurs not merely at the surface level of writing (e.g., L1-driven grammar constructions and lexis), but also at the whole text level of it. This finding is supported by James who highlights the deficiency in L2 written texts in the following words:

The overseas student /.../ employing the hidden semantic biases, the lexical collocations, the favoured grammatical constructions, and the typical rhetorical devices of his own language – quickly becomes fluent in a deviant English. (James 1984: 110)

The assumption that Estonian academic writers, independent of their L2 proficiency, may encounter considerable difficulty with English text-level rhetoric was fully confirmed by the analysis of the subjects' essays. There is no doubt that even though the textual flaws

were more pronounced in B2-level writing, the writers' lower linguistic competence alone did not account for the lower quality of their texts. Similarly, the higher linguistic proficiency the C1-level writers exhibited seemed not to be sufficient for producing coherent texts. It can be concluded that both the B2- and C1-level subjects' ability to work on the whole text level in a cross-culturally different context may be regarded as inadequate.

The Estonian students' essays exhibited characteristic features of L2 writing reported by previous research (e.g., Beaufort 1999, Hyland 2003, Purves 1988, Silva 1997, Swales 1990). In effect, the socio-cultural differences were reflected already in the overall generic features of the text such as *text organisation, placement of main ideas, flow of logic, audience awareness, use of metadiscourse* and *style*. Similar findings on the Estonian graduate writers' texts have been reported by Laane (1997).

It can be claimed that the *organisation of ideas* was the most significant weakness in the Estonian subjects' writing. This finding confirms the argument stated by several writing scholars (e.g., Connor 1996, Grabe and Kaplan 1996, Hoey 1991, Myles 2002) that text organisation is the most problematic area in L2 writing since non-native writers lack familiarity with the rhetorical structures of English. Text analysis clearly indicated that the majority of the writers had insufficient knowledge of the Anglo-American text macrostructure in terms of how to develop the text, where in the text important ideas should be placed and how these ideas should be supported by examples, details and evidence. At the discourse level, the Estonian students' texts showed considerably more deviations from the expected rhetorical patterns of English. The essays exhibited distinct conventional patterns of organisation and thought and distinct universal patterns in the use of cohesive ties. This evidence is supported also by Turk and Kirkman (1989: 101) who

believe that “the poor quality of much scientific and technical writing is the result /.../ of attempts to use only a restricted set of choices from the language code”.

As noted above, the majority of the Estonian students produced essays that lacked clear focus and good development of ideas. Significant differences between the B2- and C1-level subjects’ texts could be observed already *at the macro level* of the text. While most C1-level writers appeared to have a fixed schema for overall text structure and commonly acceptable lexico-semantic devices for developing it, few B2-level writers demonstrated this knowledge. Only one B2-level subject and fewer than half of the C1-level subjects produced logical, well-developed paragraphs. Even though half of the C1-level subjects had sufficient skills for developing the internal structure of single paragraphs, not all of them were able to maintain continuity between paragraphs.

Quite a number of the B2-level writers lacked awareness of the basic functional units (i.e., the introduction, the body and the conclusion) of text macrostructure and the fundamental metadiscoursal features such as layout and paragraph division. This may be the reason why the B2-level essays displayed numerous individual sentences with minimal or no interrelations between them. In this respect, it should be stressed that even though knowledge about the basic units of a text is not sufficient to organise or structure a text coherently for the scientific discourse community’s expectations, Hyland (2001) supports the assumption that it might serve as a guiding principle for a novice academic writer.

The most striking finding in terms of text organisation was the marked tendency for the C1-level writers to design their essays in a distinct conventional pattern. There may be a fairly simple explanation for that. Since essay writing is the most traditional practice for educational purposes, many novice academic writers may have the preconceived opinion that any written text should be laid out in a five-paragraph format. Furthermore, the argumentation strategies employed in some of the C1-level essays seemed to prove Coe’s

(1987: 18) assumption that “students have been socialized to believe that there are three reasons for (and/or three examples of) anything”.

As pointed out above, there were sentential and rhetorical distinctions marking the differences between the two sample groups of writers. The differences were revealed also in the markers of fluency. An expected finding was that the C1-level writers used more cohesive devices, more referential rather than lexical cohesion, and exhibited a greater variety of syntactic and lexical choices. In contrast, the B2-level subjects used fewer conjunctives ties, exhibited little variety in the use of lexical cohesion and yielded little control over L2 coherence resources in their writing.

Despite the differences above, however, the study suggests that both levels’ texts displayed a common difficulty of L2 writers in achieving *cohesion* and *coherence*. This could mean that the lack of coherence in the Estonian subjects’ texts may be attributable not only to lexico-grammatical deficits but also to insufficient knowledge of text-level writing. At this point, it should be noted that the devices for organising written texts may not always be so obvious, necessitating an understanding of the deeper relations between paragraphs, sentences and clauses.

Previous research has given contrasting views on cohesion and coherence which illuminate how crucial the role of applying these features properly may be in forming the texts. Connor (1996: 83) explains cohesion as “determined by lexically and grammatically overt intersentential relationships” and coherence as “based on semantic relationships”. Although some linguists have declared that cohesion does not define good writing (see, e.g., Degand, et al. 2003, James 1984), a number of researchers (see, e.g., Chapman 1987, Horning 1991, Irwin 1986, Lorentz 1999) maintain that it makes a substantial contribution to readability and that the perception of cohesive relations in text develops over time as writers mature in their writing.

An expected result was that most of the cross-culturally sensitive features of L2 writing were considerably more pronounced in the B2-level writers' texts; however, they were fairly well exhibited also in C1-level writing. Definitely, the C1-level subjects were more successful both on the macro-level of the text structure and on the micro-level of the word and the clause. When compared to the C1-level writers' texts, the B2-level writers' essays were less fluent and less effective in all aspects of language competence. Surprisingly, in some aspects of writing, the B2-level writers' essays appeared to be more communicative in nature. An obvious indication of that was the frequent use of speech markers and compensatory strategies. This feature contributes well to the argument that written text is no less interactive than spoken text (Crismore 1989). Another observation was that, by applying the strategic competence of the target language, the B2-level writers were able to compensate for their lack of syntactic and semantic knowledge in conveying their ideas. This aspect of writing has also been documented by Savignon (1997).

The study provides persuasive evidence to suggest that the differences between Estonian writers and native speakers of English are at least to some degree attributable to different perceptions of the *audience*. Anglo-American writers are supposed to be reader-friendly and compose texts that have a distinct pattern of logic (see, e.g., Horning 1991). In contrast, Estonian writers are taught to be polite towards the reader and not to state the obvious. In that respect they can be compared to Finnish writers who, according to Lindberg (1988, quoted in Connor 1996; 51), are also "reluctant to hammer home their points in too obvious a manner". Indeed, the Estonian students' writing appeared to be driven by content rather than audience. The writers' tendency to produce audience-free texts may be a reflection of how essay writing is taught in their native language at school.

It was evident that the writers lacked basic L2 argumentation strategies; they included a lot of narration, generalisations and global statements in their writing instead of claims,

examples, supportive evidence or solutions. In addition to that, the texts exhibited irrelevant details of content, unnecessary repetition, circumlocution and verbosity. The fact that L2 writers “less often state and support their position fully in building up the argument” is fully supported by research (Silva 1993: 664). Even the C1-level writers were inclined to develop the texts by simply restating their position, whereas “native speaker [writers] prefer to develop their arguments by stating a rationale for their position” (ibid.: 664).

Achieving the appropriate *style* for writing posed considerable problems for the Estonian subjects. A controversial issue here is that even though scientific writing is considered to be “purely objective, impersonal and informational, effective academic writing always carries the individual’s point of view” (Hyland 1996: 477). At the same time, incorporating opinions rather than facts into academic writing may make the written text unscientific and the writer sound unprofessional. (e.g., Hyland 1996, Johns and Paz 2004). These pragmatic aspects would be an important consideration in L2 writing instruction, as obviously due to cross-cultural differences the subjects appeared to lack the linguistic skills “to present their claims cautiously, accurately and modestly to meet discourse community expectations and to gain acceptance for their statements” (Hyland 1996: 477).

The Estonian students’ essays exhibited a combination of different styles and registers. In comparison with the C1-level essays, the B2-level texts appeared to be stylistically simpler in nature and displayed far more numerous instances of informal style. The C1-level essays, on the other hand, demonstrated several instances of informal personal opinions intercepted with highly formal statements. The notion that students who have a good control over the grammar and lexis of English tend to write in a mixed style has been previously examined by Skelton (1988, quoted in Swales 1990).

As appeared from the findings, the use of different shades of *formality* posed considerable problems for the Estonian subjects. However, according to Salager-Meyer (2004: 2), this tool for readability cannot be ignored, since hedges could be viewed as “strong commentative potentials of realising rhetorical objectives”. Therefore, the ability to establish an appropriate style for a particular writing purpose is crucial for Estonian academic writers publishing in English as:

Learners might have a large linguistic repertoire but not be able to implement this appropriately for particular contexts, or they may have a clear understanding of the need for different levels of formality but not have sufficient linguistic range /nor an awareness of context/ to achieve the effects they desire. (Tribble 1996: 100)

This would apply especially to novice academic writers as, in the words of White (1997: 14), “although the [academic writing] conventions may be contested, it is unwise for an aspiring member to challenge the conventions before first becoming skilled in their application and thus being admitted to the discourse community”.

Even though academic writing deals with complex ideas, a writer should adhere to the basic principles of style for readability and argumentation to achieve the desired result. As arguments in academic writing are usually complex to build and take time to develop, novice writers would need to acquire a writing style readily adaptable to most academic situations. Vande Kopple (1997: 14, quoted in Crawford Camiciotoli 2003) supports the notion that specific instruction on metadiscourse “can be useful to help readers to distinguish factual content from the writers’ commentary”. Williams (2000) asserts that writers should be taught how to produce ‘clear’ and ‘readable’ prose. Gopen and Swan (1990: 550) agree that a number of rhetorical principles “can produce clarity in communication without oversimplifying scientific issues”.

In summary, the three hypotheses posed at the beginning of the present research were verified by the subjects’ responses and the written text analysis. The overall findings suggest that Estonian writers have typical cross-cultural problems of L2 writers in

composing English texts. Above all, it can be stated that Estonian writers' awareness of what contributes to readable writing and what makes a written text coherent is not well distributed. The research provides sufficient evidence to show that Estonian writers are able to recognise an effective text, but often lack strategies and skills to create a coherent text. In brief, the Estonian students' texts did not correspond to the expectations of the Anglo-American audience as they lacked sufficient textual organisers and the expected format of structure. This would definitely have caused a breakdown in real-world English academic written communication or diminished the credibility of the writers' thoughts.

Although there were many considerations (e.g., L2 linguistic competence, academic writing experience and L2 academic writing experience) to take in account, it seems that the writers' foreign language competence was deficient mostly on the *whole text level*. Quite a number of writers demonstrated grammatical accuracy and lexical variation in their texts; however, they showed remarkable deficiency in *discourse constructing skills* to achieve the desired effect on the reader. In many cases, there were no significant linguistic errors at the sentence level; however, the subjects still produced poor writing in terms of *thematic development* and *text organisation*. This phenomenon in L2 writing is well supported by research in contrastive rhetoric (e.g., Mauranen 1993a, Ventola 1996). As the study demonstrated, language level variations (B2 and C1) were quite well pronounced not only in linguistic competence but also in discourse and socio-cultural competences. At the same time, the observed differences in the quality of B2- and C1-level writing may be attributable not only to the writers' language fluency, but also to individual performances or some other factors.

Implications

The overall findings lead to tentative conclusions about the research questions of the study. Consequently, the findings have implications for both L2 academic writing

pedagogy and research in Estonia. Above all, the present study suggests that the quality of English written texts of Estonian writers could be improved, if students' overall language competence were more developed. Furthermore, the study provides substantial evidence to argue that the discoursal and sociocultural principles of text formation and the cross-cultural differences in rhetorical conventions should be focused on more in L2 writing instruction. Such instruction would be especially relevant as research provides enough evidence to suggest that many of the differences in rhetorical conventions can be taught.

Currently, in tertiary-level English instruction in Estonia, far more emphasis is being placed on the linguistic competence of grammar, mechanics and vocabulary than on the discoursal, sociocultural and strategic competences of writing. This can be explained by the fact that awareness of textual and cross-cultural issues is often considered an abstract concept that is difficult to teach and difficult to learn. Indeed, recognising the text structure with its overall textual pattern, inter-clause relations, cohesive links and lexical ties can be quite problematic for L2 writers. However, one has to agree with Hyland (2003) who believes that writing instruction could be decoupled from the 'grammar' or 'personal writing' approaches. Raimes (1985: 45) supports the view that rhetoric should be an important consideration in academic writing as "the knowledge of [textual] patterns can considerably improve writers' ability to compose coherent texts".

Although it may be assumed that the need for discourse-driven writing instruction increases with higher levels of language ability, there is persuasive evidence to suggest that students can be trained to focus on the deeper principles of writing already at the lower level of L2 language proficiency. The argument that lower level writers need to control common core forms before getting on to specific features of language is not supported by research in L2 acquisition (see, e.g., Flowerdew 2002: 178). Writers may need to focus more on sentence-level features at lower proficiencies, but "there is no need to ignore

either discourse or discipline” (Hyland 2001: 7). Similarly, even though some conventions may be more difficult to master than others, participation in academic activities rarely depends on writers’ full command of grammatical forms. This is a particularly crucial aspect in academic fields such as engineering and information technology “in which most students have scientific backgrounds and scarce knowledge of linguistic notions”. (Crawford Camiciottoli 2003: 6)

In the light of this, it can be stated that both variables – the *linguistic fluency* and *cross-cultural familiarity* – are important in producing effective writing (see, e.g., Ferris 1991, quoted in Ostler 2002). Weigle highlights the discourse-driven aspect of such instruction as follows:

Writing has also become more important as tenants of communicative language teaching – that is, teaching language as a system of communication rather than as an object of study – have taken hold in both second- and foreign-language settings. The traditional view in language classes that writing functions primarily to support and reinforce patterns of oral language use, grammar, and vocabulary, is being supplanted by the notion that writing in a second language is a worthwhile enterprise in and of itself. (Weigle 2002: 22)

This would require a renewed perspective for English academic writing instruction in which writers were introduced to the Anglo-American norms of writing and made aware of language constraints reflected in different genres and purposes of writing. With the renewed rhetorical interest in the text, writers would be able to connect sentence-level features to larger textual patterns. Such discourse-driven English writing instruction could focus on the communicative aspect of academic written discourse involving all aspects of language competence.

Based on the academics’ responses, knowledge of the *rhetorical variation* in the writing practices of discourse communities appears to be equally important in order to initiate novice writers into these communities. Therefore, the present research suggests a view of writing expertise combining both *general* and *context-specific* writing skills, although no clear agreement exists on this among the researchers in the field (see, e.g.,

Flower and Hayes 1981). Certainly, there are universal skills and features of written language that are transferable across different disciplines; however, there are also literacy skills and language forms that are specific to particular communities only. The main principle to follow would be to recognise the view of academic literacy as language in context (Hyland 2001).

The assumption is that although different discourse communities and genres require varied writing skills, knowledge of the socio-cultural aspects of writing and the traditional rhetorical concepts of audience and purpose could be the basis for L2 novice academic writers to produce texts acceptable to the Anglo-American standard. In the same way, Spack (1988: 39) maintains that academic writers, who wish to publish internationally, need to become aware of “the complexity of interaction between the writer/reader relationship, specific genre, overall text organisation, cohesion, presupposition, and lexical choice to understand what can be included in the text and what should be omitted or presupposed”.

As there is no doubt that language teachers “lack the expertise to teach subject specific conventions”, Spack (1988: 40-41) suggests that L2 writing instruction should focus primarily on ‘*general principles of inquiry and rhetoric*’. Therefore, undergraduate students as novice academic writers, with relatively little experience of extensive academic writing even in L1, would need a fairly basic introduction to Anglo-American writing norms, specific genre conventions and audience expectations. Another argument for a ‘common-core’ L2 instruction is based on the assumption that the majority of undergraduate students would need L2 writing for professional rather than scientific purposes.

The English academic writing instruction could be orientated towards rhetorical awareness-raising with focus on textuality (i.e., *text*, *context* and *genre*) and discoursal

patterns of text production. Under these circumstances, language teachers' role could be to encourage writers to maintain their focus on the *deeper principles* of writing, which should also be reflected in evaluating and assessing students' texts and providing feedback on academics' scientific prose. A pedagogical focus on text-level rhetoric can shift writers' attention from sentence-level grammar to discoursal features, which are fundamental in creating meaning. English teachers should attempt to consider all the layers of text organisation (i.e., *the surface structural level, the rhetorical level and the level of assumption*) and all the language competences (i.e., *linguistic, discoursal, sociocultural and strategic competences*) to develop good academic writers. Such instruction could equip students with the communicative skills necessary to participate in international written discourse.

One way to improve the quality of L2 writers' texts is to raise the cross-cultural awareness of rhetorical aspects of writing till the writers master the *forms*. The use of real-world *models* could contribute considerably to the familiarisation of L2 writers with English rhetoric. Although some researchers (Escholz 1980, Watson 1982, quoted by Master 1997) seem to argue that models as finished products are limiting the writer's freedom of expression, White (1988: 7) asserts that "models are to be drawn upon as a resource". Indeed, undergraduate students have been trained how to write a five-paragraph English essay; in academic settings, however, they would also need to know what discipline-specific genres such as a technical report, a thesis or a scientific article will involve. This view is also supported by Tribble:

/.../ writers need to know about the typical structure and organization of texts associated with the genres in which they have to write, and they need to gain control over different modes of argumentation to handle the discussion of data. They also need to be able to express themselves in the most effective and appropriate style for the context in which they are writing. (Tribble 1996: 95)

A corpus-based approach to EAP writing instruction, in which learners are exposed to a collection of academic texts rather than only the conventional model of a five-paragraph essay could improve writers' competence in composing field-specific genres as well.

As stated throughout the research paper, *text organisation*, *argumentation*, and *style* are the three most important aspects of English academic writing. Similarly, *purpose*, *audience* and *focus* are the key elements of the rhetorical context for writing. Since there is sufficient evidence (see, e.g., Bhatia 2002, Flowerdew 2002, Hyland 2003) to suggest that rhetorics contrasts not only across cultures but also across disciplines, knowing the underlying textual and lexical elements of written discourse facilitates both writers' and readers' recognition of the overall structure of the text and meeting the audience expectations. Clearly, writing for an English speaking academic audience requires knowledge of different levels of the text: *the sentence*, *the paragraph* and *the overall organisational levels of the text*. This is not easy to achieve, as Mauranen (1993a) reveals about the English academic texts written by Finnish academics: "Finnish cultural patterns of text organization still hold even in the case of sophisticated expert users of English, members of the international discourse community".

Even though writing performance is highly dependent also on the writers' personal characteristics and real-world knowledge of the topic, the factors related to social and cultural context may considerably influence the outcome. Originally used to refer to Finnish writers, the following statement may be well applicable to the Estonian writers:

There is no reason in principle, for Finnish to try to change their rhetorical strategies. However, in practice, the Finnish culture is a minority culture, and the Anglo-American culture dominates in the academic world. Awareness of these intercultural rhetorical differences is therefore particularly useful for Finnish writers, if they want to make informed choices about whether and when to conform to the expectations of the target audience. (Mauranen 1993: 18)

In order to succeed in English-speaking academic written discourse, it is necessary for Estonian writers to conform to the organisational patterns of the Anglo-American audience. A pedagogical focus on text-level rhetoric can shift students' attention from

sentence-level grammar to discourse features such as textual structuring and propositional unity, which are crucial to creating meaning in texts. In addition to providing useful information for undergraduate students, a rhetoric-based instruction could be of value also to Estonian expert academic writers in a variety of disciplines; it is clear that learning to write for academic purposes is a complex process, which requires prolonged contacts with real-world texts and a great deal of practice.

As stated above, the present research suggests a new discourse-driven perspective for L2 writing instruction. More importantly, it provides a hypothesis for further investigations in order to discover whether such instruction would be beneficial only for writers at higher levels of language competence or whether learners should be exposed to text-level rhetoric already at lower levels of language competence. The provision of an adequate English writing instruction may appear to be a key consideration in the acquisition of internationally acceptable English writing skills. Apart from that, contrastive rhetoric research with native speaker corpora of texts could help Estonian writers to recognise how they could achieve their aims in international written discourse.

The present research does not pretend to be exhaustive. First, the study was conducted under conditions imposed by one educational setting (the Tallinn University of Technology). Therefore, the findings may be specific to this institutional context and of relative value to other contexts. Another limitation of the study lies in its small sample size (10 academics, 23 undergraduate students and 16 English language teachers). While conducting the study on the academics, neither their individual academic writing performance nor their proficiency of English was tested. The testing was not carried out since the academics' participation in the e-mail questionnaire was low – only 10 of the 40 addressees responded. As the research did not aim to investigate more specific genres of academic writing, the written text analysis was restricted to a 250-word essay.

Due to the relative diversity in sampling and research procedures, the discourse data obtained may not be fully comparable. However, the findings are expected to reflect broadly representative views among the four sample groups. Although the numeric data presented in the study may not be statistically significant, they are provided as illustrative material for the research.

The present research attempted to highlight the importance and difficulty of L2 academic writing in the conventions of the English-speaking discourse communities. Although the overall findings of the study yielded several significant data, more longitudinal research on L2 academic writing would need to be carried out in different settings (e.g., social sciences, arts, etc) and tertiary level institutions in Estonia to fully prove the hypotheses stated in the research.

CONCLUSION

Writing in English has become an important tool for communication in today's international academic community. Thus, success in the academia is largely based on the ability to convey information and create new knowledge by means of this medium. However, writing as a social, cultural and cognitive phenomenon presents particular challenges to non-native writers. Similarly, the discoursal and socio-cultural complexities of English frequently pose problems for Estonian academic writers who lack language competences to communicate the knowledge effectively.

Several previous studies have examined academic literacy (e.g., Johns 1997); however, researchers have reached no consensus on what exactly contributes to good academic writing and effective style. Recent research (e.g., Bhatia 1993, Connor 1996, Hyland 2003, Swales 1990, Tribble 1996) in written discourse and genre analysis in academic contexts suggests that there are fundamental differences in the use of lexicogrammatical, semanticopragmatic and discoursal resources not only in languages but also in specialist academic genres.

As argued in the paper, cross-cultural differences in written discourse may result in inefficient communication when the target community does not understand the writer's assumptions. This is taken to reflect that through appropriate rhetorical choices, writers could engage the audience in more effective transaction of ideas. Evidence (see, e.g., Hyland 2001, Myles 2002) has shown that even with grammatical errors in the text, writers who are knowledgeable about the underlying rhetorical principles of English written discourse, produce texts acceptable to the native-speaker audience. In the light of this, discoursal and socio-cultural competences are especially relevant for Estonian writers using English as a tool for international communication.

The present research focused on the underlying principles of L2 text-level writing and highlighted the language competences Estonian academic writers would need to create coherent texts for international English-speaking audiences. Chapter I provided a theoretical background to the Anglo-American academic writing style and addressed the fundamental aspects of text-level rhetoric concerned with text organisation, argumentation and style. Based on the works of prominent writing scholars, this research stated three main hypotheses. The first hypothesis proposed that Estonian academic writers consider linguistic competence the most important aspect of English written discourse. The second hypothesis assumed that most Estonian writers lack discoursal and socio-cultural competences of English writing, which, in turn, will affect their success in international communication. The third hypothesis suggested that the English writing instruction in Estonia focuses mostly on language acquisition, whereas the rhetorical and cross-cultural aspects of writing are not adequately addressed.

In order to test the given hypotheses, a small-scale experimental study was carried out at the Tallinn University of Technology in 2004-2005, the results of which are discussed in Chapters II and III. The study examined different levels of L2 academic writing literacy, involving both novice writers (the undergraduate students) and expert writers (the academic faculty members and English language teachers). The aim of the study was to explore common problems in the English academic writing of the Estonian academics and undergraduate students with special focus on the rhetorical and cross-cultural aspects of written discourse. Another consideration was to clarify the Estonian writers' practices and needs in English written discourse in order to upgrade L2 academic writing instruction and enhance the quality of L2 writing. For this reason, the English language teachers were involved in the study.

In the study, three different questionnaires were conducted among the sample groups of 10 academic faculty members, 23 undergraduate students and 16 English language teachers of the university. In addition to that, an open-ended interview was carried out with five academics. In the final stage of the study, written discourse analysis of the undergraduate students' (levels B2 and C1) academic essays was performed.

The examination of the academics' views was carried out to reveal their practices in writing and gain an understanding of the various aspects of expert academic writing. The needs' analysis questionnaire was conducted to elicit the students' views on academic writing. The analysis of the students' essays was performed to gain further insight into the difficulty Estonian novice academic writers may have in composing texts. The investigation of the language teachers' perceptions on writing was carried out to define the role of text-level rhetoric in L2 tertiary level study.

The experimental study provided sufficient evidence to verify the three hypotheses of the research. The findings showed that in composing L2 texts, the Estonian subjects focused almost exclusively on the surface levels of word and sentence rather than the level of the whole discourse. While the subjects seemed to be aware of the basic features of English academic writing, they demonstrated considerable lack of the discoursal and socio-cultural competences of the target language.

The present study has implications for both L2 writing pedagogy and research in Estonia. The findings suggest that Estonian writers have little awareness of the Anglo-American writing conventions (e.g., discourse, metadiscourse, text unity, interactional aspects of writing, genre-specific norms, etc.). The data revealed that even though English language teachers may recognise the role of text-level discourse in effective academic writing, rhetoric is not an integral part of L2 language instruction at tertiary level institutions in Estonia. However, to help students become more successful writers, a

specific discourse-driven writing instruction should be integrated into English for Academic Purposes courses.

The academics' interviews revealed that the writing skill in advanced academic contexts involves more than a matter of knowing various language structures and discourse strategies. The common concepts of academic writing such as genre, authenticity, discourse community, communicative purpose and audience differ considerably across different discourse communities. Although most Estonian academic writers already possess a reasonably adequate competence in the use of English for general functions, they would also need to develop discipline-specific rhetorical language skills in order to handle specialist discourse better and to become more effective writers in their field.

The Anglo-American writing tradition is a product of many considerations including audience, purpose, organisation, style, flow and presentation. In order to be accepted in the international English-speaking discourse community, the Estonian writer will have to follow all the above considerations. The study revealed that Estonian writers would need guidance in adhering to Anglo-American writing conventions and producing quality texts acceptable to publishing standards. Increased awareness of the rhetorical and cross-cultural differences of language could enable writers to adapt to the patterns of thinking dominant in the English-speaking academic world.

Although the present research does not pretend to be exhaustive, it has highlighted the crucial aspects of English academic written discourse and thus fulfilled its objectives. The research provided insight into the experiences and practices of Estonian academic writers in English written discourse and identified common problems the writers have in composing texts. Based on the findings, the research suggests a renewed perspective for L2 academic writing instruction to address text-level aspects of discourse adequately and improve the quality of Estonian writers' texts. The research serves as a basis for more

profound investigations into the Anglo-American written discourse with the aim to discover whether text-level rhetoric should be taught already at lower levels of L2 competence. More research, however, in different educational, disciplinary and cross-cultural settings is needed to enhance L2 academic writing instruction, and thus provide Estonian writers with a better understanding of the significance of text-level rhetoric in Anglo-American written discourse.

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RESÜMEE

TARTU ÜLIKOOL

INGLISE FILOLOOGIA ÕPPETOOL

Kärt Rummel

HOW TO WRITE READER-FRIENDLY TEXTS: COMMON PROBLEMS IN THE ENGLISH ACADEMIC WRITING OF ESTONIAN WRITERS

KUIDAS KIRJUTADA LOETAVAIK TEKSTE. EESTLASTE PROBLEEMIDEST INGLISE KEELES KIRJUTAMISEL

Magistritöö

2005

Lehekülgede arv: 187

Annotatsioon:

Kirjutamistavad sõltuvad meid ümbritsevast kultuurikeskkonnast. Inglise keele tähtsustumine teadus- ja tehnikavaldkondades ning teisalt võimalus teadvustada oma erialalisi saavutusi avaramal rahvusvahelisel tasandil motiveerivad eesti akadeemilisi autoreid rohkem võõrkeeles kirjutama.

Kirjutamine on raske töö nii emakeeles kui ka võõrkeeles. Sisuliste ja vormiliste teadmiste kõrval on kirjutajale vajalikud nii kontekstuaalsed kui ka kirjutamisprotsessi juhtivad teadmised. Seega küsimused, kuidas luua loetavaid-mõistetavaid tekste, järgida rahvusvahelises akadeemilises kirjalikus suhtluses kehtivaid konventsioone ning vallata tekstitüüpe ja tekstiloome strateegiaid on aktuaalsed nii võõrkeeles kui ka emakeeles kirjutamisel.

Magistritöös vaadeldakse anglo-ameerika akadeemilisele kirjutamistraditsioonile omase sidusa, kvaliteetse ja lugejasõbraliku teksti omadusi ja selle loome põhimõtteid ning analüüsitakse eestlaste raskusi inglise keelsete akadeemiliste tekstide loomisel. Magistritöös püstitatakse kaks küsimust:

1. Millised on eesti kirjutajate põhiprobleemid inglise keelsete akadeemiliste tekstide loomisel?
2. Millised on eesti kirjutajate teadmised anglo-ameerika akadeemilisele suhtlusele omastest kirjutamiskonventsioonidest, tekstitüüpidest ja tekstiloome strateegiatest?

Töö esimeses peatükis käsitletakse anglo-ameerika tekstiloome teoreetilisi aspekte ning kultuuridevahelistest erinevustest tulenevaid iseärasusi akadeemilises kirjalikus suhtluses. Töö teises osas tutvustatakse Tallinna Tehnikaülikoolis läbi viidud kolmele kirjalikule ning ühele suulisele küsimustikule rajatud uuringu tulemusi. Uurimistöös osales 10 teadlast ning erialaõppejõudu, 23 erineva inglise keele tasemege (B2 ja C1) üliõpilast ning 16 inglise keele õppejõudu. Töö oluliseks osaks on üliõpilaste testitingimustes kirjutatud inglise keelsete tekstide võrdlev analüüs.

Magistritöö kolmandas peatükis analüüsitakse uuringu tulemusi. Uurimistööst järeldub, et inglise keelt võõrkeelena kirjutaja keskendub teksti loomisel sageli selle mikrotasandile (grammatika, ortograafia jms.), jättes makrotasandi (teksti sidusus, loogilisus, ülesehitus jms.) vajaliku tähelepanuta. Paraku kannab just teksti makrotasand kaalukat rolli kirjutatu loetavuse tagamisel. Vajalike teadmiste olemasolu aitaks kirjutajal teksti loomeprotsessi tunduvalt lihtsustada ja lugejal omakorda teksti kiiremini töödelda.

Akadeemilise võõrkeeleõpetuse üheks eesmärgiks tuleks seada oskus luua kontekstis aktsepteeritavaid, loogiliselt sidusaid ja hästi mõistetavaid lugejasõbralikke tekste. Kirjutaja tähelepanu tuleks juhtida teksti sisu kandvatele süvatasanditele ja lugeja ootustele. Magistritöö tulemused viitavad vajadusele uurida, kas loogiliselt sidusate tekstide loomine on ühitatav mikrotasandi keeleoskuse omandamisega.

Märksõnad:

inglise keel ja keeleteadus
inglise keele didaktika
tekstilingvistika
kultuuridevaheline kommunikatsioon

APPENDIX 1

Model of writing as communicative language use by Chapelle et al. (1993)

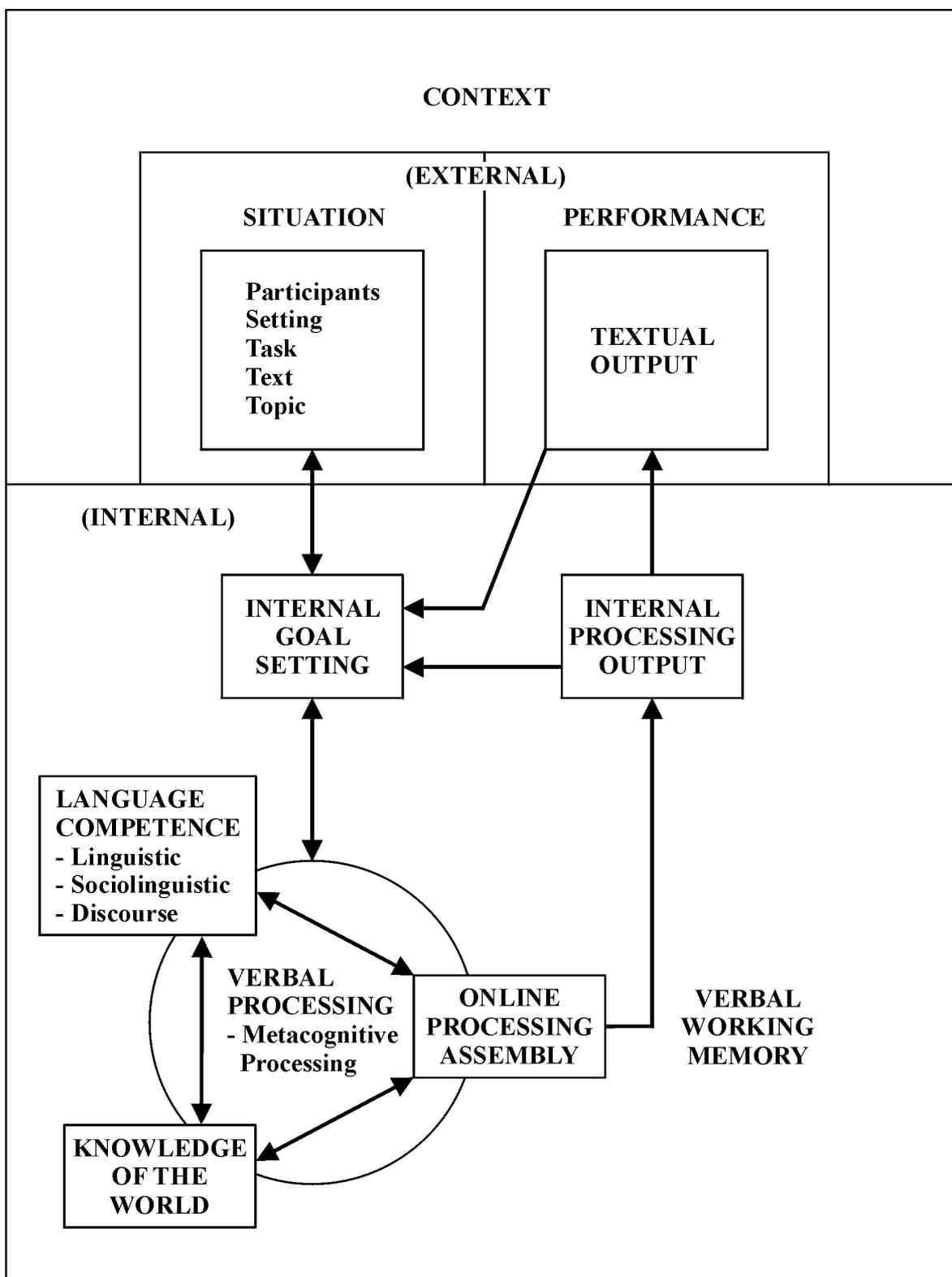


Figure 16. Model of writing as communicative language use (Chapelle et al. 1993, quoted in Grabe and Kaplan 1996: 225).

APPENDIX 2

Model of text construction by Grabe and Kaplan (1996)

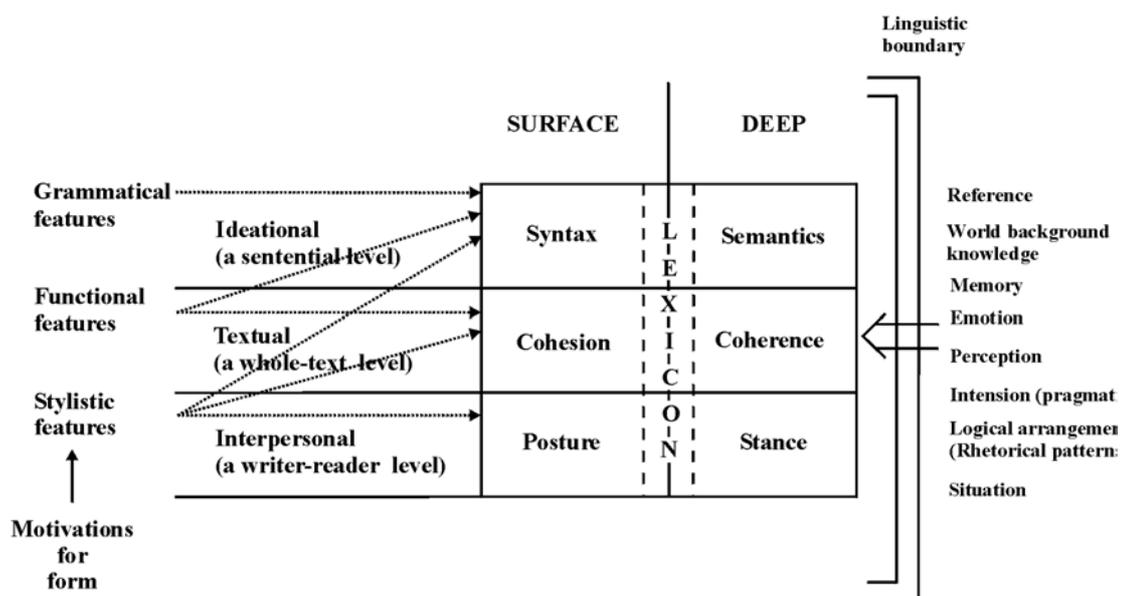


Figure 17. Model of text construction (Grabe and Kaplan 1996: 81).

APPENDIX 3

Classification system for metadiscourse categories adapted by Connor

(Adapted from Crismore 1993: 46-47, quoted in Connor 1996: 46)

Classification system for metadiscourse

Textual metadiscourse

1. Text connectives, which help readers recognize how texts are organized, and how different parts of the text are connected to each other functionally or semantically (e.g., *first, next, however, but*)
2. Code glosses, which help readers grasp and interpret the meanings of words and phrases (e.g., *X means Y*)
3. Illocution markers, which make explicit what speech act is being performed at certain points in texts (e.g., *to sum up, to give an example*)
4. Narrators, which let readers know who said or wrote something (e.g., *according to X*)

Interpersonal metadiscourse

1. Validity markers, which assess the truth-value of the propositional content and show the author's degree of commitment to that assessment, that is, hedges (e.g., *might, perhaps*), emphatics (e.g., *clearly, obviously*), attributors (e.g., *according to X*), which are used to guide readers to judge or respect the truth-value of the propositional content as the author wishes.
2. Attitude markers, which are used to reveal the writer's attitude toward the propositional content (e.g., *surprisingly, it is fortunate that*)
3. Commentaries, which draw readers into an implicit dialogue with the author (e.g., *you may not agree that, dear reader, you might wish to read the last section first*)

(Vande Kopple 1985, as it appeared in Crismore et al. 1993: 46)

Revised classification system for metadiscourse categories

I. Textual metadiscourse (used for logical and ethical appeals)

1. Textual markers
 - Logical connectives
 - Sequencers
 - Reminders
 - Topicalizers
2. Interpretive markers
 - Code glosses
 - Illocution markers
 - Announcements

II. Interpersonal metadiscourse (used for emotional and ethical appeals)

3. Hedges (epistemic certainty markers)
4. Certainty markers (epistemic emphatics)
5. Attributors
6. Attitude markers
7. Commentary

(Crismore 1993: 47)

APPENDIX 4

Sample marking scale for argumentative essays

Table 13. *Sample marking scale for argumentative essays (Saar and Uiho 2004: 61).*

	GRAMMAR	MECHANICAL ACCURACY	VOCABULARY	ORGANISATION	CONTENT AND STYLE
5	wide range & correct use of complex structures *very few slips & minor errors	X X X	wide range of effective and appropriate vocabulary *controlled and natural use of language *appropriate register	completely logical organisational structure *varied use of cohesive devices *complex sentence structure	X X X
4		X X X			X X X
3	sufficient accuracy *some gross or systematic errors and more minor errors which do not distort communication *sound grasp of tense system	almost no errors of spelling, punctuation, capitalization	somewhat limited vocabulary but largely correct OR more adventurous but less accurate vocabulary *able to express oneself without distortion	sufficient organisation *easily followed most of the time *occasionally repetitive *some variety of sentence structure *some use of cohesive devices	arguments effectively related to specific area within the topic *consistent & appropriate style
2					
1	low accuracy *frequent basic errors *grammatical patterns based on direct translation *unable to apply the tense system appropriately	frequent or systematic errors but meaning mostly not confused or obscured OR some gross errors *POOR HANDWRITING	limited vocabulary *misuse of words makes communication difficult *essentially translation	practically no organisation *ONLY simple sentences or serious, frequent errors in sentence structure *no cohesive devices	written mostly to the point with occasional lapses *not consistent in tone *use of contractions *is shorter than 200 words
0	ignores topic	ILLEGIBLE HANDWRITING ignores topic	ignores topic	ignores topic	ignores topic OR is shorter than 180 words

12-13 points Grade 1

14-15 points Grade 2

16-17 points Grade 3

18-19 points Grade 4

20-21 points Grade 5

APPENDIX 5

The academics' questionnaire: Writing scientific articles in English

Name:

Occupation/Job Title:

Degree:

Number of scientific articles published: as author/ as co-author

Places of publishing/ Journals published in:
.....
.....

1. How difficult do you find the following aspects in writing a scientific article?

1 – very easy; 2 – quite easy; 3 – rather difficult; 4 – very difficult; 5 – hard to say

- | | |
|--------------------------------------|-----------|
| <input type="checkbox"/> language | 1 2 3 4 5 |
| grammar | 1 2 3 4 5 |
| sentence structure | 1 2 3 4 5 |
| general vocabulary | 1 2 3 4 5 |
| field terminology | 1 2 3 4 5 |
| paragraph structure | 1 2 3 4 5 |
| logical flow of ideas | 1 2 3 4 5 |
| text overall organisation | 1 2 3 4 5 |
| <input type="checkbox"/> content | 1 2 3 4 5 |
| <input type="checkbox"/> time | 1 2 3 4 5 |
| <input type="checkbox"/> other | 1 2 3 4 5 |

2. How many drafts do you usually produce?

Composing a scientific article in Estonian:

Composing a scientific article in English:

3. What problems did you encounter as a 'novice' academic writer?

1 – often; 2 – sometimes; 3 – seldom; 4 – never; 5 – hard to say

- | | |
|--|-----------|
| <input type="checkbox"/> using correct grammar and spelling | 1 2 3 4 5 |
| <input type="checkbox"/> meeting publishing conventions | 1 2 3 4 5 |
| <input type="checkbox"/> using appropriate field terminology | 1 2 3 4 5 |
| <input type="checkbox"/> using appropriate general vocabulary | 1 2 3 4 5 |
| <input type="checkbox"/> maintaining the logical flow of ideas | 1 2 3 4 5 |
| <input type="checkbox"/> achieving paragraph unity | 1 2 3 4 5 |
| <input type="checkbox"/> achieving text overall unity | 1 2 3 4 5 |
| <input type="checkbox"/> managing visual data (e.g., charts, tables, etc.) | 1 2 3 4 5 |
| <input type="checkbox"/> achieving academic style for readability | 1 2 3 4 5 |
| <input type="checkbox"/> other | 1 2 3 4 5 |

4. In which aspects of writing would you require language support?

1 – often; 2 – sometimes; 3 – seldom; 4 – never; 5 – hard to say

- | | |
|---|-----------|
| <input type="checkbox"/> grammar | 1 2 3 4 5 |
| <input type="checkbox"/> language use | 1 2 3 4 5 |
| <input type="checkbox"/> field terminology | 1 2 3 4 5 |
| <input type="checkbox"/> sentence structure | 1 2 3 4 5 |
| <input type="checkbox"/> paragraph structure | 1 2 3 4 5 |
| <input type="checkbox"/> logical development of ideas | 1 2 3 4 5 |
| <input type="checkbox"/> combining sentences | 1 2 3 4 5 |
| <input type="checkbox"/> paragraph development | 1 2 3 4 5 |
| <input type="checkbox"/> scientific rhetoric | 1 2 3 4 5 |
| <input type="checkbox"/> scientific style | 1 2 3 4 5 |
| <input type="checkbox"/> text overall organisation | 1 2 3 4 5 |
| <input type="checkbox"/> other | 1 2 3 4 5 |

5. How do you usually compose a scientific article?

- I compose the text in Estonian first and then translate it into English
- I compose the text in Estonian, then translate the article into English and finally have it edited by a language consultant
- I compose the text in Estonian and then have it translated into English
- I compose the text in English
- I compose the text in English and then have it edited by a language consultant
- other

6. How much time does it take you to write a scientific article?

1 – a lot; 2 – quite a lot; 3 – quite little; 4 – very little; 5 – hard to say

- | | in Estonian | in English |
|---|--------------------|-------------------|
| <input type="checkbox"/> brainstorming and note-taking | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> designing the text | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> writing drafts | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> reformulating ideas | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> restructuring sentences and paragraphs | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> finding appropriate general vocabulary | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> finding appropriate field terminology | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> designing graphs, formulae and figures | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> revising the text for language | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> revising the text for content | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> editing the final draft for language | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> editing the final draft for content | 1 2 3 4 5 | 1 2 3 4 5 |
| <input type="checkbox"/> editing the article for publication | 1 2 3 4 5 | 1 2 3 4 5 |

I usually compose the article in ... days/ ... weeks.

7. Which of the following connective ties would you employ in your scientific articles?

Could you mark in bold the words and phrases that you would prefer?

Could you mark in italics the words and phrases that you would rather avoid?

however	as	as a result
on the other hand	just as	as a consequence
on the contrary	in addition	consequently
in/by contrast	furthermore	because
in/by comparison	moreover	hence
nevertheless	besides	thus
instead	in fact	therefore
still	alternatively	for this reason
nonetheless	apart from	another reason for this is
otherwise	indeed	subsequently
unless	meanwhile	along with
conversely	take, say	given (a choice)
unlike	consider, say	as for
but	for example	as far as ... is concerned
yet	for instance	with regard to
since	such as	regarding
although	including	with reference to
though	as follows	in terms of
even though	excluding	on the question of
rather than	except	by means of
while	with the exception of	in parallel to
whereas	conventionally	in the case of
in spite of	in other words	to a certain extent
despite	in conclusion	in a sense
due to	in summary	in principle
once	in brief	in theory
similarly	in short	in practice
likewise	finally	in detail
also	to sum up	based on
too	overall	according to
and	eventually	on the basis of
both.....and	so	
not only...but also	accordingly	

other:

.....

**8. Which of the following words and phrases would you prefer in scientific writing?
Could you mark these words and phrases in bold?**

clearly	it can be imagined
obviously	there are (a number of cases)
plainly	(substances) have been analysed
significantly	(systems) are being implemented
definitely	apparently
undoubtedly	hypothetically
assuredly	possibly
certainly	ideally
indisputably	seemingly
plainly	superficially
rightly	strangely
fortunately/unfortunately	unexpectedly
it seems to me	could
it appears	might
from my point of view	may
should	would
must	
ought to	

In scientific writing, I prefer to use:

- linguistic signals of commitment
- linguistic signals of avoidance

9. How would you present *new information* in sentences?

- I would place new information at the beginning of the sentence
- I would place new information at the end of the sentence
- It would depend on the sentence
- It is hard to say
- other

10. How often do you consult English scientific articles for language constructions?

- often
- sometimes
- seldom
- never

11. Do you employ a fixed set of phrases and constructions in all your articles? Do you use a fixed whole-text framework?

- I use the same textual framework
- I use the same language constructions
- sometimes I alter the textual framework
- sometimes I employ the same textual framework
- I use a unique textual framework in every new article
- I use unique language constructions in every new article

12. Do you consider 'unique' language important in scientific writing?

- highly important
- sometimes important
- not important at all
- other

13. Do you consider connective ties (e.g., 'by contrast', 'furthermore', etc.) important in improving the logical flow of ideas/sentences/paragraphs in a text?

- yes, highly important
- quite important
- not very important: in scientific writing, content is more important than language
- not important: connective ties do not contribute to the readability of the text

I do not employ connective ties since

14. Would you use 'And', 'But', 'So' and 'Also' in sentence-initial position in scientific articles?

- often
- sometimes
- seldom
- never

I prefer to start sentences with (please, mark in bold or underline):

'And' 'But' 'So' 'Also'

I do not employ these words in sentence-initial position since

15. Can you find any problems in using the underlined words in a scientific article?

- a) *The sophisticated computer sound system lets the user input pitch and duration from the MIDI keyboard. This facilitates musical transcription.*
- b) *When a second character arrives at the port before the first character has been unloaded, the port stores the second character in the same register, overwriting it.*

- these words are often inadequately defined
- these words diminish the readability of writing (e.g., when overused or misused)
- these words are not sophisticated enough to be employed in scientific writing
- these words should be replaced by text-specific content words
- other

16. Do you consider the words such as ‘this’, ‘they’ and ‘it’ important in connecting ideas in a text?

- mostly, yes
- maybe
- sometimes, yes
- no, not at all
- hard to say

17. Do you prefer to compose in short or complex sentences?

- I prefer short sentences in order to make the text clear for the reader
- I prefer long sentences (2-3 lines) in order to handle the scientific issue adequately
- I combine both types of sentences to vary the style
- I combine both types of sentences and highlight the crucial points in short sentences
- other

18. Do you sometimes formulate your ideas as questions?

For example, “How do such distributed networks behave?”

- often
- sometimes
- seldom
- never

I employ questions in my articles in order to

19. Which of the following aspects of writing do you consider most important in improving the readability of your written texts?

- paragraph unity (development of the main idea with examples and details)
- text overall unity (logical development of the text: the introduction, the body and the conclusion; logical flow of ideas, etc.)
- effective style (variety of structures)
- sophisticated style (complex structures)
- clear and simple style
- usage of connective ties (logical development of ideas, e.g., by means of ‘however’, ‘simultaneously’, etc.)
- pronoun referencing (logical development of ideas, e.g., by means of ‘*its measurements*’, ‘*their properties*’, etc.)
- repetition of key words (with focus on important ideas or details)
- other

20. How do you improve the quality of the final draft of your written text? How important do you consider the following aspects/factors in that process?

1 – very important; 2 – quite important; 3 – not so important; 4 – not important at all; 5 – hard to say

- | | |
|--|-----------|
| <input type="checkbox"/> content | 1 2 3 4 5 |
| <input type="checkbox"/> text overall organisation | 1 2 3 4 5 |
| <input type="checkbox"/> language | 1 2 3 4 5 |
| • grammatical accuracy | 1 2 3 4 5 |
| • spelling and punctuation | 1 2 3 4 5 |
| • sentence structure | 1 2 3 4 5 |
| • vocabulary | 1 2 3 4 5 |
| • text organisation | 1 2 3 4 5 |
| • flow of ideas (e.g., cohesive ties, lexical ties, etc.) | 1 2 3 4 5 |
| <input type="checkbox"/> feedback on content | 1 2 3 4 5 |
| <input type="checkbox"/> feedback on language | 1 2 3 4 5 |
| <input type="checkbox"/> computer software (e.g., spell checker, etc.) | 1 2 3 4 5 |

21. Where do you receive language feedback on your scientific articles from?

1 – often; 2 – sometimes; 3 – seldom; 4 – never

- | | |
|--|---------|
| <input type="checkbox"/> from science editors | 1 2 3 4 |
| <input type="checkbox"/> from language consultants | 1 2 3 4 |
| <input type="checkbox"/> from peers | 1 2 3 4 |
| <input type="checkbox"/> in reference books | 1 2 3 4 |
| <input type="checkbox"/> in the Internet | 1 2 3 4 |
| <input type="checkbox"/> other | 1 2 3 4 |

Would you be willing to share your ideas on academic writing in an interview?

- yes
 maybe
 no

APPENDIX 6

The undergraduate students' needs analysis questionnaire

ENGLISH FOR ACADEMIC PURPOSES

Autumn Term 2004

Course Participant Questionnaire

Name:

1. Why are you taking the course?
2. Where have you acquired your present language skills? How many years have you studied English?
3. How would you assess your English skills? (Give points from 1 to 5)

reading
writing

listening
speaking

4. What subject knowledge do you have?
5. Please indicate the frequency of each activity in your job/studies, etc.:

A – often, B – sometimes, C – rarely, D – never

Do you have to read anything in English? A B C D

Do you have to write anything in English? A B C D

Do you have to speak English? A B C D

6. What do you need to read in English?
7. What do you need to write in English?
8. What English skills should you improve to be successful in your future career?
(Give the order of importance)

reading
writing

listening
speaking

9. What is 'academic writing'?
10. How important do you think the following six factors are in academic writing?
Provide the order of importance (1 – most important; 6 – least important) and
give your comments on each factor.

Grammatical accuracy

Spelling and punctuation

Subject content

Overall organisation

Vocabulary

Good ideas

11. How would you improve the readability of your writing? What aspect would you consider the most?
12. Should you always think of writing as a way of communication? Why?

APPENDIX 7

The English language teachers' questionnaire

Name: (optional)

Date.....

- 1. How important do you think the following six factors are in academic writing? Could you provide the overall order of importance (1 – most important, 6 – least important) and give short comments on each aspect?**

Grammatical accuracy

B2 level

C1 level

Spelling and punctuation

B2 level

C1 level

Subject content

B2 level

C1 level

Overall organisation

B2 level

C1 level

Vocabulary

B2 level

C1 level

Good ideas

B2 level

C1 level

- 2. What is 'text organisation'?**

.....

- 3. How could ideas be linked in a text?**

.....

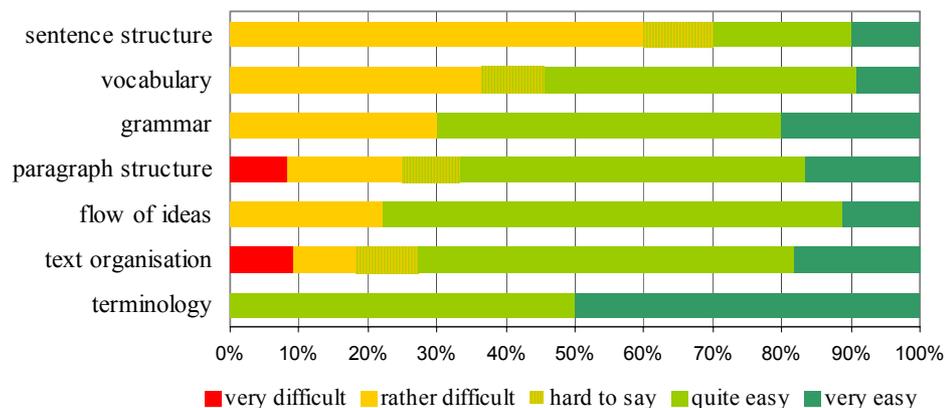
- 4. How could students improve their writing?**

.....

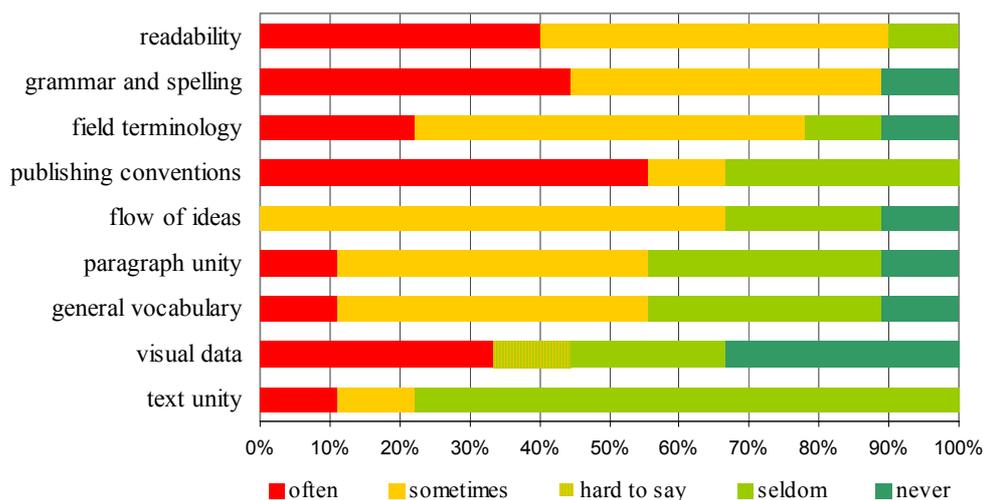
APPENDIX 8

The academics' questionnaire: Detailed distribution of responses

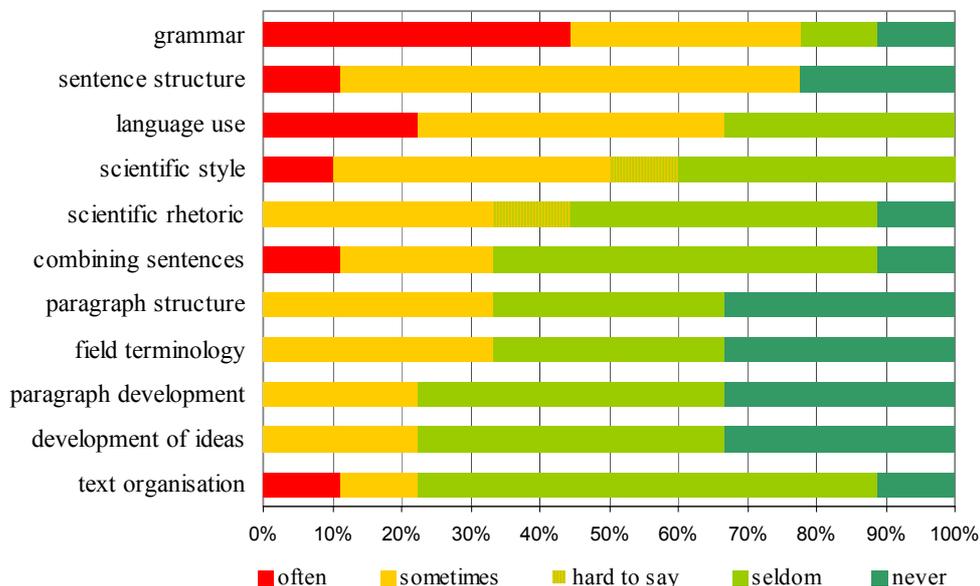
Question 1. How difficult do you find the following aspects in writing a scientific article?



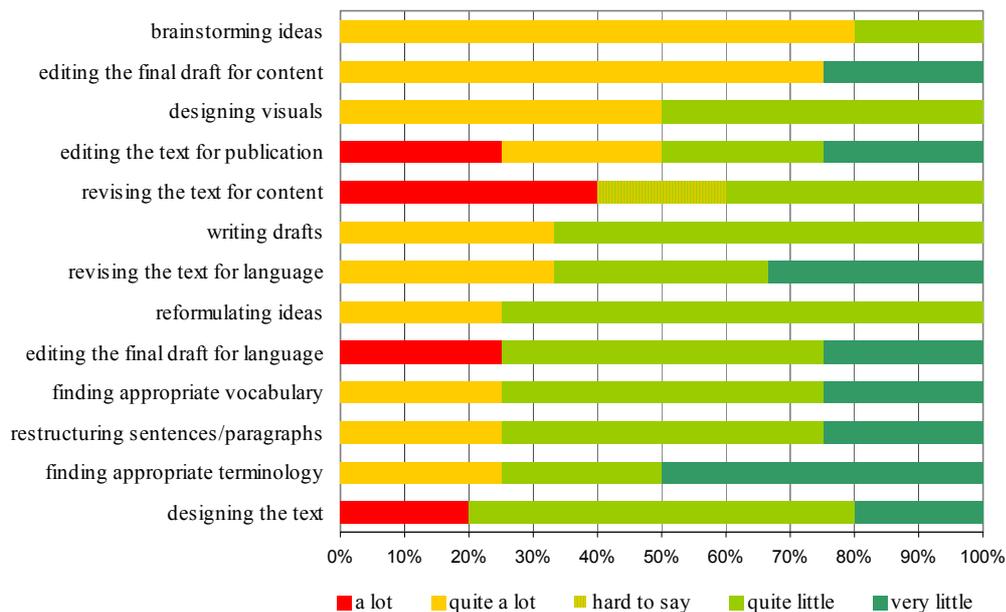
Question 3. What problems did you encounter as 'novice' academic writer?



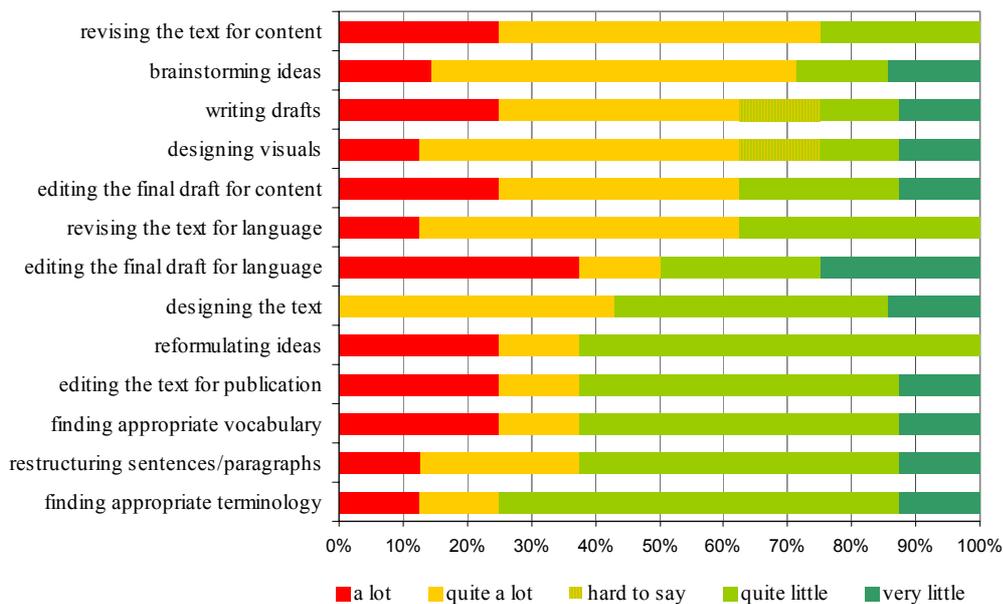
Question 4. In which aspects of writing would you require language support?



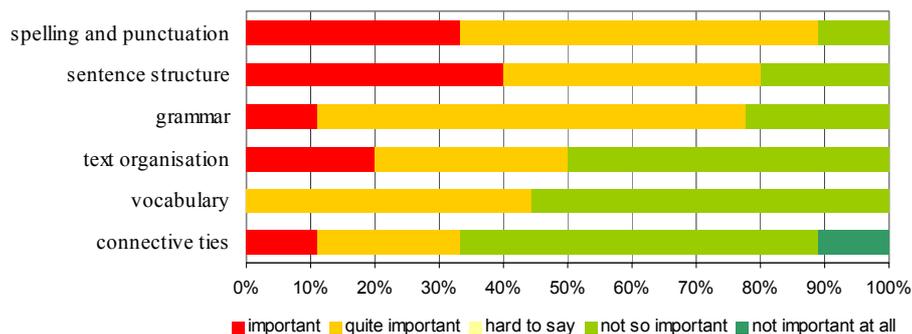
Question 6. How much time does it take you to write a scientific article? (in Estonian)



Question 6. How much time does it take you to write a scientific article? (in English)



Question 20. How do you improve the quality of the final draft of your written text?



APPENDIX 9

The important aspects of academic writing: The students' and teachers' responses

(see Students' Questionnaire Appendix 6, Question 10; Teachers' Questionnaire Appendix 7, Question 1)

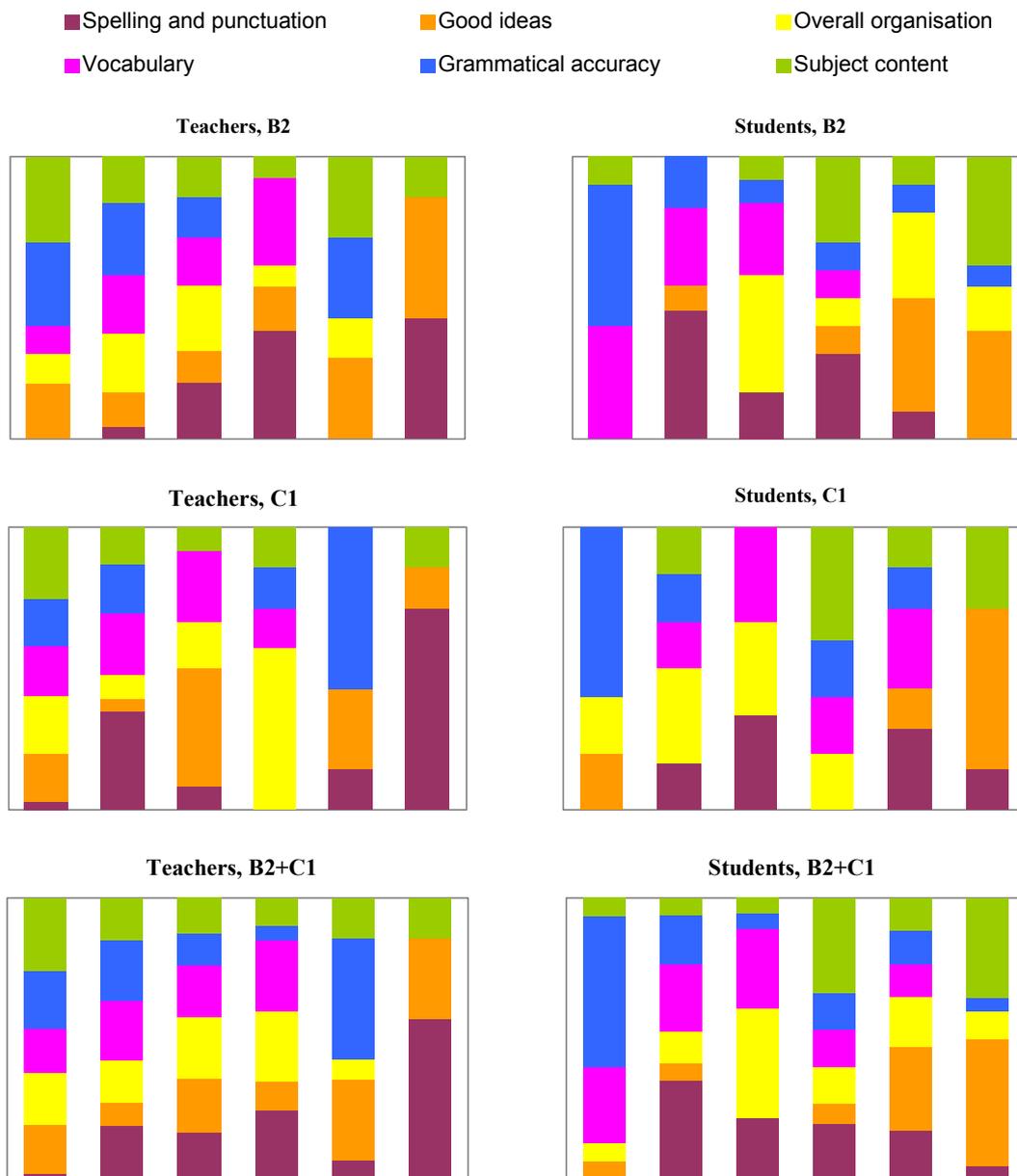
The distribution of the students' and teachers' responses to the question "How important do you think the following six factors (*grammatical accuracy, spelling and punctuation, subject content, vocabulary, overall organisation and good ideas*) are in academic writing?"

A. Ranking of the aspects of writing

Level	Value*	Teachers (%)						Students (%)					
		1	2	3	4	5	6	1	2	3	4	5	6
Grammatical accuracy													
B2	19	38	31	0	13	0	45	18	9	9	9	9	9
C1	44	25	0	6	25	0	50	17	0	17	17	0	0
C1+B2	31	31	16	3	19	0	47	18	6	12	12	6	6
Spelling and punctuation													
B2	0	6	44	31	0	19	0	45	18	27	9	0	0
C1	6	50	6	0	6	31	0	17	33	0	33	17	0
C1+B2	3	28	25	16	3	25	0	35	24	18	18	6	6
Subject content													
B2	19	25	31	6	13	6	9	0	9	27	9	45	0
C1	63	19	6	6	0	6	0	17	0	33	17	33	0
C1+B2	41	22	19	6	6	6	6	6	6	29	12	41	0
Overall organisation													
B2	6	31	50	6	6	0	0	0	45	9	27	18	0
C1	50	13	13	25	0	0	17	33	33	17	0	0	0
C1+B2	28	22	31	16	3	0	6	12	41	12	18	12	0
Vocabulary													
B2	6	31	38	25	0	0	36	27	27	9	0	0	0
C1	44	31	19	6	0	0	0	17	33	17	33	0	0
C1+B2	25	31	28	16	0	0	24	24	29	12	12	0	0
Good ideas													
B2	13	19	25	13	13	19	0	9	0	9	36	45	0
C1	44	6	31	0	13	6	17	0	0	0	17	67	0
C1+B2	28	13	28	6	13	13	6	6	0	6	29	53	0

* Value: 1 – most important ... 6 – least important

B. Ranking of the aspects of writing by the respondents' categories.



Legend: 1 – most important ... 6 – least important

APPENDIX 10

Cohesive ties in student writing samples in the alphabetical order

Cohesive tie	B2-level sample	C1-level sample	Cohesive tie	B2-level sample	C1-level sample
According to	-	2	In general	1	1
Actually	1	1	In most cases	-	1
Additionally	1	1	In summary	1	-
Again	-	1	In terms of	-	1
Also	3	2	In the first place	-	1
Although	-	1	Lastly	-	1
And	4	2	Moreover	-	2
As	1	1	Naturally	-	1
As a result	-	1	Obviously	1	-
As a whole	-	1	On the contrary	-	1
As soon as	-	1	On the whole	-	2
At first	1	-	On top of that	-	1
At the same time	1	1	Particularly	-	1
Because	5	-	Probably	1	1
Because of that	1	-	Sadly	-	1
But	4	2	Second	1	1
By and large	-	1	Secondly	2	1
Clearly	-	2	Similarly	1	1
Despite	1	-	Since	-	1
Drastically	-	1	So	5	3
Equally	-	1	Speaking generally	1	1
Finally	2	1	Still	1	1
First	2	1	Then	2	1
Firstly	-	1	Therefore	-	3
First of all	2	1	Third	-	1
For example	3	5	Thirdly	-	3
For instance	-	2	Thus	-	4
Furthermore	-	1	Though	1	1
Hence	-	1	To begin with	-	1
However	-	3	To conclude	1	2
In addition	-	1	To start with	-	1
In conclusion	-	3	What is more	-	1
In contrast	1	1			

APPENDIX 11

Cohesive ties in the academics' responses

(see Appendix 5, Question 7)

A. Cohesive ties favoured by the academics (in the descending order of frequency)

Cohesive tie	Frequency	Cohesive tie	Frequency
according to	10	unless	4
finally	9	as a consequence	3
however	9	as for	3
on the other hand	9	both... and	3
as	8	consider, say	3
for example	8	conventionally	3
also	7	despite	3
although	7	even though	3
instead	7	excluding	3
nevertheless	7	for instance	3
on the basis of	7	in other words	3
while	7	in principle	3
as a result	6	in spite of	3
as follows	6	rather than	3
because	6	such as	3
but	6	to sum up	3
due to	6	too	3
in addition	6	unlike	3
in theory	6	whereas	3
including	6	along with	2
otherwise	6	alternatively	2
therefore	6	another reason for this is	2
thus	6	as far as ... is concerned	2
accordingly	5	because	2
besides	5	eventually	2
except	5	hence	2
furthermore	5	in a sense	2
in conclusion	5	in terms of	2
in detail	5	once	2
in practice	5	similarly	2
not only ... but also	5	though	2
similarly	5	to a certain extent	2
so	5	with reference to	2
still	5	with the exception of	2
yet	5	given (a choice)	1
and	4	in brief	1
by means of	4	in parallel to	1
consequently	4	in principle	1
for this reason	4	in summary	1
in comparison	4	indeed	1
in fact	4	just as	1
in the case of	4	likewise	1
moreover	4	meanwhile	1
on the contrary	4	on the question of	1
since	4	regarding	1
subsequently	4		

B. Cohesives ties ‘not preferred’ by the academics (in the descending order of frequency)

<u>Cohesive tie</u>	<u>No of answers</u>	<u>Cohesive tie</u>	<u>No of answers</u>
too	4	even though	1
consider, say	3	eventually	1
conversely	3	excluding	1
in parallel to	3	for instance	1
nonetheless	3	in brief	1
take say	3	in comparison	1
to sum up	3	in contrast	1
alternatively	2	in other words	1
another reason for this	2	in summary	1
as a consequence	2	meanwhile	1
in short	2	moreover	1
indeed	2	not only... but also	1
just as	2	on the question of	1
on the contrary	2	overall	1
with the exception of	2	rather than	1
accordingly	1	so	1
also	1	to a certain extent	1
apart from	1	unless	1
as a result	1	whereas	1
as far as ... is concerned	1	with reference to	1
based on	1	with regard to	1
consequently	1	yet	1
conventionally	1		

APPENDIX 12.

Common European Framework of Reference: Global Scale of Levels

(CEFR 2001)

Proficient User	C2	Can understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.
	C1	Can understand a wide range of demanding, longer texts, and recognise implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.
Independent User	B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
	B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans.
Basic User	A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.
	A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.