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**ASPECTS OF TEACHING AND LEARNING ENGLISH AS A FOREIGN
LANGUAGE IN THE CASE OF BLIND AND VISUALLY IMPAIRED LEARNERS IN
ESTONIA**

MA Thesis

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ABSTRACT

It is assumed that blind and visually impaired foreign language learners experience more difficulties in their foreign language learning than sighted learners as they need adaptive and technical accommodations in their learning process. In addition, their opportunities for implicit foreign language learning are more limited. There are several obstacles connected with the absence of visual information and a necessity for adapted study and testing materials.

The aim of this Master's Thesis is to describe and analyse the factors influencing the process of teaching/learning English as a foreign language in the case of students with blindness or low-vision and to highlight the supportive measures used in practice. The main attention is paid to the accessibility issues, such as adapted study materials for the blind/visually impaired learners; accommodations and promising activities and ways of organizing teaching/learning process.

For getting answers to the research questions on those issues, two surveys were carried out: one among learners with blindness/low-vision and the other among foreign language teachers of visually impaired students in Estonia. There were 32 respondents among visually impaired learners and 12 among foreign language teachers. Two different questionnaires were developed and administered among the sample groups.

In the sections of analysis, the main aspects of teaching/learning English and foreign languages in learners with blindness/low-vision are highlighted from the point of view of foreign language teachers of visually impaired students and blind/visually impaired foreign language learners. In addition, the topic of accommodations of foreign language examinations is discussed according to the responses of a focus group interview with two specialists in the field. Some suggestions are provided after the section of discussion.

This information may be beneficial to EFL teachers of visually impaired students both in special and mainstream schools. Due to the strengthening of the inclusive approach in Estonian education policy, mainstream school EFL teachers may need additional knowledge of special educational needs of this field, even though the occurrence of blindness/visual impairment is relatively small.

Keywords: special educational needs, students with visual impairment, blindness, low-vision, accommodations, adapted study material for visually impaired, Braille, teaching in EFL/ESL, language acquisition.

TABLE OF CONTENTS

Abstract	2
Abbreviations and definitions.....	4
Introduction	5
1. Theoretical Aspects of Visual Impairment and Foreign Language Teaching/Learning ..	10
1.1. Background Information on Blindness Visual Impairment	10
1.1.1. Definitions of Blindness Low-Vision and Visual Impairment.....	10
1.1.2. Statistical Data on BVI Learners	12
1.1.3. Special Educational Needs of BVI Learners.....	13
1.2. The Impact of Foreign Language Learning in BVI.....	14
1.2.1. The Impact of Visual Impairment on EFL Acquisition and Learning.....	15
1.2.2. Impact of Information Input and Reading in Visually Impaired learners.....	17
1.3. Access to Information and Adapting Study Materials in BVI EFL Learners.....	19
1.3.1. Accommodations in the case of BVI language learners	20
1.3.2. Adapting Study Materials to BVI Learners' Needs.....	21
1.4. Teaching/Testing in BVI Learners	22
1.4.1. Teaching BVI Foreign Language Learners.....	23
1.4.2. Accommodations in Testing of BVI Language learners.....	25
2. Empirical Study on Teaching/Learning EFL in BVI Learners in Estonia	28
2.1. Research Questions and Methodology	28
2.2. Results and analysis.....	30
2.2.1. The Respondents.....	30
2.2.2. Analysis of the Responses.....	32
2.2.2.1. Accommodations used in BVI.....	33
2.2.2.2. Special Devices in Use.....	34
2.2.2.3. Considering Special Educational Needs in BVI Learners.....	38
2.2.2.4. Activities and Ways of Organizing Teaching/Learning Process in BVI ..	40
2.2.2.5. Differences in Teaching/Learning EFL in the case BVI.....	42
2.2.2.6. Accommodations Used at Examinations and in Tests	43
2.2.3. Focus Group Interview Results	46
2.3. Discussion and Suggestions	47
2.3.1. Aspects of Accessibility	48
2.3.2. Aspects of Teaching/Learning in BVI.....	50
2.3.3. Aspects of Testing in BVI.....	53
2.3.4. Suggestions for Teaching/Learning EFL in BVI.....	54
Conclusion.....	56
References	60
Appendices	63
Appendix 1 Questionnaire for FL Teachers of BVI	63
Appendix 2 Questionnaire for BVI Learners	67
Appendix 3 Summary of Responses of FL Teachers of BVI by questions.....	71
Appendix 4 Summary of Responses of BVI learners by questions.....	83
Resümee	98

ABBREVIATIONS AND DEFINITIONS

In this Master's Thesis the following abbreviations and definitions are used:

B – blind /blindness; a person is blind or with blindness if his/her vision acuity after best possible correction is less than 0.05 (normal 1.0) or his/her vision field from the centre is less than 10° (normal 180°).

BLV – blind/blindness or low-vision is used as an equivalent for visual impairment; a person is visually impaired or with visual impairment if s/he is with blindness or low-vision

BVI – blind/visually impaired

Braille - a tactile reading and writing system for the blind where a letter is presented as a tactile combination of a 6-dot cell (traditionally, which gives 64 different combinations) or of an 8-dot cell (on ICT based Braille display with 256 combinations).

EFL – English as a foreign language, used in the case English is not an official language of a country.

English: Grade 1 – alphabetic Braille

English Grade 2 – contracted Braille 189 signs

ESL – English as a second language, used in the case English is an official language of a country.

ICT – information communication technology

L/LV – low-vision; a person is with low-vision/visual impairment if his/her vision acuity after best possible correction is less than 0.3 (normal 1.0) or his/her vision field from the centre is less than 30° and better than 10° (normal vision field 180°).

SEN – special educational needs.

SLA – second language acquisition.

Note, that in the context of this Master's Thesis, both EFL and ESL are used interchangeably, even though the focus is on EFL. The reason for this lies in the fact that more research available in the case of BVI is carried out in the countries where English is an official language, however, it may be assumed that the results of ESL, SLA could be considered appropriate also for EFL at least to some extent.

TQ – question of the teachers' questionnaire

Q – question of the BVI learners' questionnaire

INTRODUCTION

It is assumed that visually impaired foreign language learners experience more difficulties in their learning process than sighted learners. The obstacles derive mainly from the absence or reduced input of visual information which may negatively influence the teaching/learning process. In addition, the opportunities for incidental/implicit foreign language learning/acquisition are limited in the case of low-vision or blindness.

There are two main aspects in learning which are highly dependent on the visual channel: firstly, the aspects connected with the format of study materials and, secondly, the methods and ways of teaching suitable in the case of visually impaired foreign language learners. Therefore, it is extremely important to provide study materials in accessible formats, implement accommodations and use activities and teaching methods others than those which heavily rely upon visual clues for comprehension.

Hence, foreign language teachers of students with blindness or low-vision may feel challenged because of the need for additional knowledge of special educational needs and methodologies appropriate in the case of visually impaired students. Traditionally, the specific knowledge and expertise on teaching blind and visually impaired (henceforth, BVI) students have been available in special schools for BVI children. In European countries with inclusive education, there are special resource centres for providing support to mainstream/regular school teachers of BVI students. This seems to confirm the need for teachers having knowledge of educational needs of BVI students.

The survey carried out by the European Blind Union on equal access to the national curriculum, showed the increasing tendency of the European learning system towards inclusive education (EBU 2009). Estonia is one of the countries where the inclusive education policy is followed. Estonia has ratified the UN Convention on the Rights of Persons with

Disabilities, recognizing the right of persons with disabilities to education without discrimination and on the basis of equal opportunity (UNCRPD Art 24). The principles of inclusive education are declared in several international and national legal acts. In the Education Act of Estonia (Ministry 2012), it is stated that every child has the right to obtain education in her/his local school and “children with special needs have the right to learn in schools of their residence like all other children” (Ministry N.d.a). The National Curricula for Basic and Secondary School are also valid for students with special needs in Estonia. In § 18 of the Basic School and Upper Secondary School Act, it is stated that the parents can choose the school for their compulsory school age child if there is a vacant place. According to the Education Act, children with special needs have the right to attend the school close to their place of residence.

Hence, the importance of considering special educational needs (henceforth, SEN) has increased in recent years in Estonia. In 2011/12, about half of the students with SEN studied in mainstream schools (SEN 2013) and it could be argued that the ratio of students with SEN studying at mainstream schools will be increasing, considering that the principles of inclusive education are not only declared but also implemented in practice, the number of teachers who may need the specific knowledge about teaching students with SEN, including BVI students, may increase among mainstream school teachers in Estonia.

The principles of special measures for supporting children with SEN, including measures for supporting visually impaired learners, have been explicitly stated also in the Estonian National Curricula for Basic Schools and Gymnasium adopted in 2011 (Ministry 2011a, b). The second factor which has drawn attention to the teaching/learning foreign languages derives from that legal document. The Estonian National Curricula for Basic School and for Secondary School have included foreign languages as main subjects for many

decades already. However, according to the new version of the Estonian National Curriculum for Gymnasium/Upper Secondary School adopted in 2011 (Ministry 2011b), an examination in a foreign language will be compulsory as one of the national examinations; and it will be enacted in 2014. This raises the accessibility issues such as accommodations and adaptation of examination papers, at the same time highlighting the need for appropriate teaching and testing methodologies in the case of visually impaired foreign language learners.

Even though special educational needs are acknowledged as important in education policy, there is an aspect concerning visual impairment which makes taking it into account more complicated. On the one hand, visual impairment is a disability which causes very specific educational needs and very specific knowledge is needed for meeting those needs. On the other hand, it is a very rare disability and may not be considered very important when only statistics matter.

Visual impairment is a term, used for blindness and low-vision (BLV). As already mentioned, visual impairment is a low-occurrence disability. It is estimated that two in 1000 school-age children are visually impaired; the occurrence of children with total blindness without additional disabilities is as much as ten times smaller (Mason 1999). Therefore, it may be assumed that the experiences, expertise and research in the field of teaching foreign languages, including English, in BLV are very specific and cannot be widespread, especially in a small-population country like Estonia.

However, similar problems are recognized in other countries. In addition, it is stated that more research is needed in the field, even though there are references to the surveys carried out on this theme, mainly from the point of view of teaching English as a second language (ESL) and second language acquisition (SLA). The European Blind Union has stated that improving the accessibility of language learning for visually impaired persons is

one of its goals and has found that “In this area, the research in pedagogical engineering is very limited and thus cannot benefit everybody” (EBU 2010: 3). In their very recent research Topor and Rosenblum (2013: 90) conclude, “Research is needed that examines how best to prepare professionals to have knowledge of both the impact of visual impairment and the impact of the acquisition of second language on students.”

Having been working as an English teacher of visually impaired children at a special school, I do agree with the previous statement. Therefore, a survey on aspects of teaching/learning English as a foreign language in the case of blind/visually impaired learners in Estonia was designed and carried out in the framework of this Master’s Thesis. The following main research question was formulated:

How can students with visual impairment best be supported in their learning of English as a foreign language (EFL) ?

The sub-questions determined were:

How to enable access to information and study environment/materials for blind/low-vision EFL learners?

What activities and ways of organising the teaching/learning process are most suitable in the case of blindness/low-vision?

In this Master’s Thesis, the main attention will be paid to the supportive measures, accessibility issues and promising ways of organizing teaching/learning process elaborated from the point of view of FL teachers and BVI learners. In the theoretical part of the Master’s Thesis, an overview of the aspects of visual impairment and foreign language learning will be provided. It is common knowledge that learning a foreign language is influenced by learners’ personal characteristics. Several researchers (Dörnyei 2009, Lightbown and Spada 2006) have highlighted the importance of considering individual differences, learners’ language

aptitude, motivation and emotions but also their environment. In this study, the existence of person-to-person variation is acknowledged; however, main attention will be paid to the special educational needs and challenges in foreign language learning caused by blindness or low-vision. Some aspects of impact of visual impairment on language learning/acquisition will be highlighted keeping in mind learning a foreign language. The topics of supportive measures such as accommodations in teaching/learning/testing and adaptations of study materials will be elaborated in the final chapters of the theoretical part.

In the empirical part, the practical teaching experiences of foreign language teachers of BVI students and learning experiences of BVI students will be described and analysed. The discussion is based on two surveys administered from March to May 2013 in Estonia. The first survey was conducted among 12 foreign language teachers of BVI students from special and mainstream/regular schools and the second among 32 BVI learners of English as a foreign language. The surveys were focused on addressing special educational needs caused by blindness or low-vision and the personal experiences of teachers and BVI learners of EFL. In the final part of discussion, some suggestions for considering special educational needs of visually impaired foreign language learners will be provided.

In conclusion, the main aspects specific for teaching/learning foreign languages in the case of BVI learners will be defined; among them the supportive measures and ways of organizing teaching/learning process will be described. Also the factors that may influence the implementation of accommodations in testing process will be highlighted.

1. THEORETICAL ASPECTS OF VISUAL IMPAIRMENT AND FOREIGN LANGUAGE TEACHING/LEARNING

Blind and visually impaired (BVI) students may face a variety of obstacles in their learning process caused by the inaccessibility of the visual medium. At the same time, teaching those students is a challenging task for their teachers due to the need for specific knowledge of special educational needs (SEN) of their students. Therefore, special measures are necessary to implement for supporting the foreign language acquisition and teaching/learning process in the case of BVI learners. It has been found that it is necessary to identify strategies, materials and characteristics of BVI students that support learning of English for gaining “a better understanding of the unique challenges of students and methodologies that are most effective in meeting their diverse educational needs” (Topor and Rosenblum 2013: 90). Considering that the principles of inclusion have been acknowledged in the Estonian education policy, there is a need for special knowledge about teaching students with blindness/low-vision also in Estonia.

1.1. Background Information on Blindness Visual Impairment

In this chapter, the definitions of blindness/low-vision and visual impairment are provided with some statistical data; also some issues connected with student’s vision loss and special educational needs are dealt with.

1.1.1. Definitions of Blindness Low-Vision and Visual Impairment

The terminology to define loss of vision or reduced vision is quite diverse. The terms used more often are: blindness, low-vision, vision/visual impairment, visual disorder, vision loss and visual disability. There are also different definitions in use depending on whether

these terms are used in medicine, rehabilitation or education. However, two basic criteria to indicate that a person does not have vision, or has only partial vision, are vision acuity and vision field.

According to the World Health Organisation's classification (WHO 2010), a person is "visually impaired" (or with "low-vision") if his/her vision acuity in the better eye with best possible correction is less than 0.3 (normal vision is 1.0) or vision field from the centre is less than 30 degrees (normal vision field 180°); a person is totally "blind" (or with "blindness") if his/her vision acuity in the better eye with best correction is less than 0.05 (3/60) or his/her vision field from the centre is less than 10 degrees. For medical classification, there are several subgroups defining visual impairment and blindness more precisely. In rehabilitation, the term most often used is "visual disability", and the definition is connected with the existence of social barriers and the need of additional assistance. There are also definitions based on functional use of vision.

In education, 'visual impairment' and 'blindness' are conditions which cause special educational needs; being defined as "an impairment in vision which, even after correction, adversely affects educational performance" (Castellano 2005:15). In addition to the above-mentioned definitions, Carol Castellano suggests to use a skills definition of blindness/visual impairment. According to that, blindness/visual impairment (BVI) means "using alternative skills and tools in place of, or in addition to, eyesight in order to gain information or perform tasks" (2005:16). The simplest definition of visual impairment used in practice is that a person is visually impaired if s/he cannot read ordinary printed text due to his/her vision loss without special aids or adaptations. In this paper, the WHO definition and the definition used in education based on special skills are kept in mind; however, the term "visually impaired" is

used in the case there is no distinction between persons with blindness and low-vision/visual impairment in the context.

1.1.2. Statistical Data on BVI Learners

Visual impairment is a rare condition. It is estimated that two school-age children out of 1000 (2.11 in 1000) may have some kind of visual impairment (Mason 1999: 14). According to data, the occurrence of blindness in European regions among children (less than 15 years of age) is 0.03 – 0.051%, among those 15-49 years old the percentage is 0.1 – 0.15 (Resnikoff et al 2004: 846). The occurrence of blindness without accompanying intellectual or multiple disabilities is between 1–4.1 per 10 000 children (Kocur 2002). The occurrence of low-vision is estimated to be about ten times higher in all age groups.

In Estonia, some statistical data on visual impairment are available from the Estonian Social Security Office and the Estonian Education Information System (EHIS). The Social Security Office registers those blind and visually impaired who are getting disability allowances, and according to their statistics, there are approximately 500 children with visual disability in Estonia. That number shows how many children are eligible for getting disability allowances; however, it does not indicate how many of them are of school-age or how severe their visual impairment is or whether these children need special accommodation of their study environment or special teaching methods in their education. It is obvious that upper secondary and university or vocational school students are also excluded from the data as the next group for such statistics is people of working age.

The Estonian Education Information System (EHIS) administers the data which is based on the information from Estonian schools. In 2011/2012, there were 360 students with visual impairment, including those with multiple visual impairment, out of 136,104 students;

the approximate occurrence about 25 children to 10,000, which is in accordance with general statistics. According to law, the special educational needs of those 360 BVI students should be taken into account and they are eligible for getting accommodations in education. The number of students registered as having visual impairment and following the regular curriculum was 102, including 66 in mainstream schools and 36 in special schools. However, there is no information about the severity of visual impairment and what kind of adaptive accommodations those students need due to their special educational needs.

1.1.3. Special Educational Needs of BVI Learners

Even though visual impairment is a low-prevalence disability, it may happen that there is a child with blindness or reduced vision in a mainstream classroom. Providing real inclusion does not mean just physical attendance, but the primary goal should be ensuring the student's participation in an effective learning process. It sounds well in words, but in reality, achieving full participation is a complicated task influenced negatively by multiple factors.

The reasons for difficulties may be caused by students' individual characteristics, such as personality, psychological traits and mental abilities, which are very variable. However, some of the factors causing special educational needs in BVI learners are quite similar in the case of BLV. Those significant factors are related to accessibility issues. It is a well-known fact that the ordinary learning process is based on vision to a great extent. Mainstream study materials tend to be visual - in addition to the printed text, there are illustrations, visual clues and effects, which are designed to support and motivate learning. Also the teaching methods and activities are prevailingly based on the use of vision. In the case of reduced vision or vision loss, such study materials and methods are not appropriate causing special educational needs of BVI learners.

The results of a project carried out among visually impaired adults on foreign language learning in the framework of the European Grundtvig programme by the European Blind Union (EBU) and the organisations of visually impaired from Cyprus, the Czech Republic, France and Slovakia, show that

there are no remarkable differences between the reasons why visually impaired (VI) people start learning foreign languages and those of sighted people. VI people, like almost everybody else, learn languages within the framework of the obligatory education system, and can wish or need to update their knowledge or to learn a new language. (EBU 2010).

The differences are most evident due to noticeably fewer opportunities for them to achieve their foreign language goals.

In recent years, there have been discussions that in the field of education, more research is required to establish research-based practices supported with the evidence and methodologies; also the quality of research has attained attention. For example in the USA, the literature on education, covering 40 years from 1964 – 2004, was reviewed to find out how students with visual impairment were taught. (Ferrell 2011). It was found that in general the results were not satisfying. In the following sections, some aspects of teaching/learning English as a foreign language in BVI will be discussed.

1.2. The Impact of Foreign Language Learning in BVI

Nowadays, teaching a foreign language to students with special educational needs is a common practice in mainstream schools and also in special schools. In Estonia, one or more foreign languages are included as main subjects into schools' curricula and taught according to the National Curricula for Basic School and Upper Secondary School (Gymnasium). The importance of foreign languages is emphasized by the fact that a foreign language will be one of the compulsory national examinations in Estonia from 2014. Certainly, knowing more than

just one language is beneficial considering social life and further work opportunities. Gray (1999: 254) emphasizes the beneficial effects of learning foreign languages to visually impaired students.

In Estonia, students with blindness/visual impairment have had the opportunity to study foreign languages for decades, and their teachers have been familiar with the aspects of teaching BVI learners. However, no information on any research in the field in Estonia was found. Therefore, the following discussion in this theoretical part is based on the experience from other countries, mainly from the countries of the European Union and the USA. As was already mentioned, more research on teaching/learning English as a foreign or second language would be necessary.

In the following part no distinction will be made between EFL, ESL and any other language learnt/taught as a foreign language in the case of BVI learners. This lies in the presumption that in the case of blindness and low-vision there are some issues and aspects which are common and have similar influence in all those cases.

1.2.1. The Impact of Visual Impairment on EFL Acquisition and Learning

In this section some aspects of language acquisition will be highlighted as it is considered relevant also for foreign language learning and teaching. It has been claimed that among numerous sub-fields of second language acquisition (SLA), there are some which have “continued the tradition of strong links with language pedagogy”, even though there is a gap between SLA and pedagogy (Ellis 1997: 6-7). It has been hypothesized that comprehensible input is a key factor in second language acquisition (Krashen 1982) and claimed that “the input hypothesis, may be the single most important concept in second language acquisition theory today” (Krashen 1982: 9). The input hypothesis by Krashner (1982: 21) also highlights

the importance of extra-linguistic information. Therefore, it may be speculated that, as extra-linguistic information, which is mainly visual, is not accessible for the visually impaired, this aspect should be considered in the acquisition of a second and/or foreign language.

Even though the work of Krashen is claimed to be not so relevant any more by several SLA researchers such as Dörnyei, mainly because of Krashen's view on natural/implicit language acquisition as superior in comparison with explicit or instructed learning, his ideas have become an integral part of the discussion on SLA. However, modern conceptions highlight the importance of explicit learning in second language acquisition and the existence of an explicit/implicit interface in the language learning process. Definitely, foreign and second language learning/acquisition depends on individual differences – on learners' individual characteristics, their language aptitude, motivational and emotional aspects, or on their working memory, which differs to a great extent from person to person. (Dörnyei 2009).

There are several views and aspects in SLA research and some of them may have even stronger impact in the case of BVI learners than in general. For example, the noticing hypothesis or incidental (vocabulary) learning or the impact of environment, also referred to by Dörnyei (2009), can be speculated to be influenced by vision or lack of vision. It has to be mentioned that no direct reference to the impact of blindness/visual impairment was found neither in the above-mentioned Dörnyei's book nor in a handbook for language teachers "How Languages are Learned" written by Patsy M. Lightbown and Nina Spada (2006) in which attention is also paid to learners' characteristics. Some useful suggestions for teaching languages to the blind and visually impaired are provided in an article by Philp R. Donley (2002).

1.2.2. Impact of Information Input and Reading in Visually Impaired learners

In the case of blindness, the inaccessibility of visual information and different input of information are the main sources of difficulties. Even though visual information is accessible to some extent in the case of low-vision, it may cause even more problems. Therefore, in the case of BLV other senses, such as aural and tactile, are used to compensate for the loss of vision.

In the case of blindness, information is often presented in the tactile format. A tactile reading and writing system named by its inventor Louis Braille has been in use since 1829 when the first book in Braille was published. Even though the technical devices for producing texts in Braille have changed remarkably, the essence of Braille – combinations of embossed dots, has not changed. In Estonia, Braille has been used for more than 100 years, but the first complete Handbook of Estonian Braille was published in 2012 only. In that handbook, in addition to Estonian Braille, the guidelines for transcribing texts into Braille in English Grade 1, French, German and Russian are provided both for the paper and digital formats.

Due to the specific way of information input in Braille, there are important aspects which should be considered. Texts in Braille can be read only letter-by-letter and, therefore, the input of information is sequential – so called linear input. It also means that any information should be presented in a linear way and that makes converting/translating ordinary texts into Braille challenging. For example, the layout of foreign language textbooks is often complicated and is overloaded with such elements of design as texts in columns, boxes and pictures. That is one of the reasons why adaptation of those books is a challenging task demanding knowledge of Braille input as well as of the language for presenting the information in an accessible and logical way.

The need for the special kind of adaptations is easily understandable in the case of Braille, but it is also necessary in the case of adapted study materials for low-vision learners. It has been highlighted by Castellano (2005) that there is no significant difference in the input text format between students with blindness and low-vision. The reason is that low-vision students who use strong magnification can access texts in a similar sequential or linear way and it is impossible for both blind and low-vision readers to grasp a text in a holistic and structural way like people with normal sight do. In the following part, studies looking into Braille users will be discussed, but considering the above-mentioned statement, the same aspects could be essential in the case of severe low-vision as well.

The sequential character of reading influences the information input in several ways. In addition to the need to present information in a unidirectional flow, it also means that it is not so easy to go back to the previous parts of the information. Therefore, the working and short-term memory may be easily overloaded during the reading process. In addition, the sequential input only by very small chunks in the case of blind and low-vision learners makes reading activities much more time-consuming and, therefore, also more exhausting in comparison with performing reading tasks by sighted persons.

Breidegard, Jönsson and Fellenius claim that

Braille readers in comparison to that of ink-print readers is a constant dilemma in education, particularly when the Braille reader is participating in the same classroom as ink-print readers and is supposed to carry out the same tasks. (Breidegard et al 2006: 50)

They point out citing other authors, such as Hampshire (1981) and Foulke (1982) that even “a skilled Braille reader reads at about half the speed of a good print reader”. They also established that reading speed depends on the layout of the Braille text, especially in reading for specific information – in skimming; skilled Braille readers are able to employ different styles according to the text type (Breidegard et al 2006).

Anneli Veispak (2012) presents her data on the reading speed of Braille readers compared with readers without vision problems based on three surveys, including one conducted among Estonian students. Her results show that Braille readers completed their different reading tasks significantly more slowly (about three times) than their sighted counterparts. Though the data were gathered about blind students reading in their mother tongue, there is no doubt that reading in a foreign language is as much or even more time-consuming. Therefore, it could be argued that the data serve as proof for the need for additional time in foreign language learning/teaching/testing process.

The deficiency of visual input is often compensated for by enhanced aural input. For example, reading tasks are performed with help of personal assistants as readers or, even more often, by using screen-reading software for making the information audible. Due to the fact that information in the digital format is considerably easier to access than texts in Braille, blind and visually impaired often use the word “to read” when they actually listen to texts. Though reading and listening are two different ways of information input, it is argued that aural input of information is also sequential by its nature as is reading Braille (Veispak 2012). Therefore that kind of “listening as reading” may be justified to some extent.

1.3. Access to Information and Adapting Study Materials in BVI EFL Learners

It could be assumed that the practical consequence of blindness and low-vision is that special measures, such as accommodations and adaptations of study materials, should be implemented to provide access to learning medium for BVI foreign language learners. Some of those aspects will be elaborated on in the following section.

1.3.1. Accommodations in the case of BVI language learners

The need for accommodations in the case of blind/visually impaired foreign language learners lies in the different and specific input of information as described earlier. It has been shown that reading is about three times more time-consuming for Braille readers than for ordinary print readers (Veispak 2012). Therefore, extended time-limits in the case of blind/visually impaired learners should be considered for doing reading-based tasks. In addition, it has to be kept in mind that performing reading tasks for longer time is tiring and breaks may be necessary, which prolongs the time even more.

Another important aspect is connected to the issue of accessibility of visual material as pictures, photos and any other visual clues which are used in the language learning process. It has been claimed that resources available for EFL teachers and students “are highly visual in impact. Textbooks are colourful and cluttered /.../. Meaning is often conveyed in visual terms by the use of pictures, diagrams and maps” (Gray 1999: 257). This visual information is not accessible for BVI students. It is possible to use tactile pictures to some extent, but it should be considered that only those tactile pictures which support learning are useful. It is also possible to replace some pictures with real objects or models. Using realia in foreign language learning is highly recommended as a useful technique (EBU 2010).

Adaptive accommodations and adjustments vary depending on learners’ individual needs. On the other hand, practical measures depend on support systems available in everyday situations. In many countries, e.g. the USA and the UK, special guidelines have been worked out to provide advice on implementing adaptive and technical accommodations. There is necessary infrastructure available and legislation regulating the process. Nevertheless, meeting individual special educational needs caused by blindness/visual impairment is a complicated task. For example, Marina Orsini-Jones (2009) conducted a study of two visually

impaired and one blind language learner at Coventry University in the UK, and found that it had been challenging for languages staff to take into account the needs of those students. The author of the research also highlights that “individual needs of partially sighted or blind students reading languages should be catered for, with particular reference to specific language tasks, such as translation and reading comprehension” (ibid.). The need for asking about students’ expectations and additional support for staff members was also highlighted. An important aspect was that the students did not want to draw attention to their visual disability and “were prepared to renounce their right to some of the special arrangements for examinations and tests in order not to be treated differently from other students” resulting in some misunderstandings between BVI students and the staff. The use of modern technology for providing accommodations was highlighted in a very positive way.

1.3.2. Adapting Study Materials to BVI Learners’ Needs

Aspects of accessibility to information and adaptation of study materials are extremely important in education of BVI students. Quite a number of studies into the issue of adapting study materials could be found in academic literature, but in most of them, very specific subject-based aspects are discussed. For example, Rulea et al (2011) give an extensive overview of adapting study materials and their impact on teachers and their BVI students in secondary science and mathematics classes. In another research carried out by Ferrell in 2011, the main attention was paid to the research into literacy and mathematics.

Though literacy and mathematics may seem quite far from foreign language learning, in the case of BVI students who use Braille and special aids, quite many problems as well as solutions could be similar as several of the aspects are common to BVI students irrespective of the subject matter. The necessity for providing an alternative medium for the delivery of

information was highlighted in the reviewed articles of this section. When the use of Braille has been common for more than 100 years, the information-communication technology (ICT) for BVI learners was introduced quite recently. ICT with such special software as screen-reading and magnifying programs, and hardware like Braille displays and scanners, is considered the most promising way of making information accessible for BVI students. Using modern ICT-based tools pre-requires good computer skills; therefore, it is important that students with blindness and low-vision acquire those skills as early as possible. In addition to that, special design is necessary to consider while adapting study materials into electronic format. The usefulness of ICT and how it can contribute to the learning of foreign languages is demonstrated in the case of students with different special educational needs (Meiring and Norman 2005).

An interesting approach is described in the article by Sanchez et al (2010) where the aspects of explicitness and implicitness in English language teaching materials are elaborated. The attention has been paid to the conscious process of language learning (explicit aspect) and to mainly unconscious process of language acquisition (implicit aspect). The authors of that research analyzed some study material and measured the ratio between the explicit and implicit ways of presenting the study material in particular textbooks. In their article, also the importance of language acquisition in the process of teaching a foreign language has been highlighted, the aspect mentioned already in a previous section of this paper.

1.4. Teaching/Testing in BVI Learners

Several authors (see e.g., Tobin 2011, Conroy 2006) have pointed out that not enough attention has been paid to research on teaching strategies suitable for BVI students as

ESL/EFL learners. However, a few studies do exist and they will be discussed below. In one of the following sections, some aspects of testing BVI students will be highlighted.

1.4.1. Teaching BVI Foreign Language Learners

The importance of choosing appropriate activities and ways of organizing teaching process has been highlighted in several research studies referred below. It is obvious that activities and methods which rely on other senses than vision are preferred. Gray concludes the topic in her article stating,

The emphasis in current teaching methodology on speaking and listening and upon communication as the prime aim can be an advantage for pupils whose most reliable channel of input is aural. The same methodology can, however, present major problems for precisely such pupils because of its heavy reliance upon the visual element to support comprehension and memory. Gray (1999: 262).

Alenka Bera and Herman Gresnigt (2002) have compiled a list of literature on teaching English as a second language in the case of blind and visually impaired students based on the articles published over the last 15 years. Among them the article on foreign language learning written by Carol Gray could be found, published in one of the basic books in the field of education of blind and visually impaired children (Gray in Mason 1999). The importance of foreign language learning and its impact on BVI students' self-esteem and career opportunities are highlighted in the article. An interesting method on the implementation of total physical response (TPR) method in teaching BVI students is described by Paula Conroy (1999); in the article from 2005, she provides an overview of some strategies such as preview, review, read aloud and already mentioned TPR with laying emphasis on "a nurturing educational environment". In Conroy's study (2005), it was found that teachers of BVI learners do not always use the best strategies for teaching English.

Conroy suggests that teachers of BVI students can use strategies based on second-language acquisition theory. However, the author points out,

A main concern in using traditional ELL teaching techniques with students who are visually impaired is the reliance on visuals to motivate or prompt language. Emphasizing verbal descriptions, as recommended in working with students with visual impairments, often is not effective for those who do not yet understand English. (Conroy 2005: 103-4).

Madeline Milian and Vicki Pearson (2005) have presented a case study in which they conclude that dual-language programs, explained as follows, are suitable for visually impaired ESL learners. Those programs can be implemented if it is possible to form integrated groups of

“language-minority students (non-English speakers) and language majority students (native English speakers) for at least 50% of the instructional time, the provision of content and literacy instruction in two languages to all students, and a balance in the number of language-minority and language-majority students in the program” (2005:715).

Dual-language programs may be an effective environment for learning English as a second language; however, that method is not possible to use for teaching English as a foreign language. Therefore, not all ESL studies can be transferred to EFL contexts; nevertheless, many of them can.

Topor and Rosenblum (2013) conducted an on-line survey among ESL teachers of BVI learners about their preparation to work with BVI children, and about strategies/methods in use. There were 66 teachers of BVI teaching English as a second language from the USA and Canada participating in the survey. In the results, an overlap in strategies used with BVI students and sighted English language learners was reported. Concerning the preparation, even though, the participants were self-selected individuals and supposedly more confident in the field, thirty percent of them did not feel qualified to work with BVI learners of ESL (Topor and Rosenblum 2013: 79).

It may be concluded that some empirical surveys have been carried out in the field of blindness/low-vision in ESL, but not enough in EFL. Clearly, more research into the foreign language teaching/learning process would be necessary. For example, Conroy (2006: 101) has stated that, “Currently, little research exists in the area of teacher training needs and successful teaching strategies for children with visual impairments who are learning English.” In the same article she points out that the teachers of BVI students must know the theory of second language acquisition and research-based teaching strategies of learning a second language for meeting the specific educational needs of BVI students (Conroy 2006: 107). This statement seems to be currently relevant and, as already mentioned, even more urgent in the case of BVI and EFL.

1.4.2. Accommodations in Testing of BVI Language learners

Teaching/learning process often involves assessment procedures which play an important role in formal education. All students, including those with blindness/visual impairment, have to pass several examinations and tests during their studies. Testing blind and visually impaired foreign language learners is a challenging task as it has to be ensured that students’ language skills are tested and that special educational needs are considered appropriately. Formal foreign language tests are usually administered in writing which means that they must be provided in accessible format, usually in Braille, large print or electronically. In some countries, e.g. in the USA, it is possible to get advice for appropriate accommodations and adaptations for examinations from special support/resource centres as there are aspects which are complicated to consider without specific knowledge of SEN caused by BLV.

A good example how special educational needs can be taken into account is an internationally recognised Test of English as a Foreign Language – TOEFL. For BVI test takers, it is possible to ask for special adaptive and technical accommodations such as test in Braille, large print or audiocassette version; also test reader, Braille test with reader's script, extended testing time, additional breaks and special technical devices depending on the needs. To obtain accommodations, it is necessary to contact ETS Disability Services before the test and get an approval.

In Estonia, the accommodations used in national examinations are regulated by a legal document of the Estonian Minister of Education and Research Decree N° 59 (Minister 2013). The following accommodations could be provided: extra time (15 minutes per hour), extra pauses, suitable formats (Braille, large print, electronic format), readers, writing on personal computer and use of other special aids (Minister 2013).

Even in the case of accommodations, there are still aspects which need extra attention in BLV. Firstly, tests have to be completed during a limited period of time. Considering that reading Braille and large text is significantly slower in the case of blindness and low-vision, the question arises about the amount of extra time necessary for fulfilling the tasks. Affording an extended time limit is quite an ordinary accommodation for examinations and tests. At the same time it means that a BVI student must concentrate and be under the stressful examination situation for longer time than sighted learners which may result in poorer performance. On the other hand, if no extra time is decided to give, the tasks should be shortened which can be achieved only by changing the tasks or omitting some parts of the test.

In testing sub-skills of reading, skimming and scanning are expected to be assessed. However, in the case of blind/visually impaired EFL learners, those test types may be not

appropriate as it is impossible to grasp the reading text in holistic way with BLV. It may happen that instead of skimming and scanning skills, BLV-specific skills such as physical orientation and navigation within the Braille or enlarged texts are measured.

Another aspect is connected with the use of readers or screen-reading software for performing reading-based tasks. In those cases reading tasks are converted into listening tasks. It may be argued that considering the similarity between sequential input of Braille and aural information, there is no need to pay attention to that issue. Moreover, it may be suggested that it does not matter whether those reading tasks are performed by using reading Braille/large print or by listening to the reader or screen-reader, comprehension and short-term working memory are mainly assessed there.

To conclude, quite a number of studies have been carried out in the field of education of BVI students, including the teaching-learning of English as a second or foreign language. However, the results of the literature review also show that the critical opinion expressed by Tobin (2011) could be considered relevant at the current moment as well. According to Tobin's (2011: 22 - 23) statement, "So far, we are somewhat lacking in these kinds of overarching theories or models in the field of visual impairment /... / to be envisaged or practicable". In the same article, Tobin (2011: 24) urges to "wider relevance of visual impairment research". The need for further research on visual impairment and foreign language learning has been highlighted by several authors (Orini-Jones 2009, Topor and Rosenblum 2013 et al).

2. EMPIRICAL STUDY ON TEACHING/LEARNING EFL IN BVI LEARNERS IN ESTONIA

This part of the Master's Thesis gives an overview of an empirical study which was carried out in order to determine the most useful supportive measures for teaching EFL to blind/visually impaired (BVI) learners. The main attention will be paid to accessibility issues, accommodations, adapted study materials and useful activities and ways of organising the teaching/learning process.

2.1. Research Questions and Methodology

Considering the issues highlighted in the theoretical part of this paper, the following main question of the research was stated

How can students with visual impairment best be supported in their learning of English as a foreign language (EFL) ?

The sub-questions determined were:

How to enable access to information and study environment/materials for blind/low-vision EFL learners?

What activities and ways of organising the teaching/learning process are most suitable in the case of blindness/low-vision?

One of the most challenging aspects of this research was the choice of appropriate methods. Considering the theme, qualitative methods with some quantitative aspects based on questionnaires were chosen for carrying out the research. The qualitative method of content analysis of open-ended questions of the questionnaires was used for finding variety of aspects of teaching/learning EFL in BVI. According to Dörnyei (2009: 108-112), who cites numerous

authors, it may be concluded that qualitative research is more suitable in the case of dynamic systems and a large variety of respondents, as BVI foreign language learners definitely are.

To meet the criteria of content validity, two different samples were formed to describe two different target groups: one of them consisting of foreign language teachers of BVI students, and the other of foreign language (FL) learners with BLV. For the sample of BVI learners, it was important that respondents could analyse their EFL learning experience and express it. In addition to those two groups, a focus group interview was carried out with two specialists from the Estonian examination office of the Foundation Innove, for elaborating the issue of accommodations of national examination materials in foreign language.

Two different questionnaires were developed: one for the FL teachers of BVI learners (Appendix 1) and the other for EFL learners with BLV (Appendix 2). Both questionnaires included open-ended questions, multiple-choice, checklists and Likert-type scales; the teachers' questionnaire consisted of 28 questions and the questionnaire for BVI learners of 30 questions. Both questionnaires followed similar logical structure: there were questions on background information of the respondents, questions about accessibility issues in teaching/learning and in examinations and test; and questions about promising ways of organizing teaching/learning and about activities/techniques in use. The questions of the teachers' questionnaire are referred as TQ and a number of a question; the questions of the BVI learners' questionnaire – Q and a number.

The questionnaires were created in the google-doc format to enable to fill them out on-line. For those respondents who preferred to answer orally, the same questionnaires were taken as an interview guide and the answers of respondents were transcribed by the interviewer. Ten of the twelve FL teachers used the on-line questionnaire. Out of 32 BVI respondents, the online option was used by 20 respondents and 12 were interviewed orally (7

by telephone, 5 in face-to-face sessions). All respondents were contacted before administering the questionnaires for asking their agreement. Both questionnaires were administered in Estonian and the answers were translated into English by the author.

2.2. Results and analysis

The following results are based on the data gathered using two questionnaires. Both quantitative and qualitative data are provided. The quantitative data are based on multiple-choice and Likert-scale type answers. The qualitative data were driven from open-ended textbox answers which were coded and selected according to the answers. The summaries of responses of both sample groups are provided in appendices 3 and 4. The answers of teachers are indicated as T1 to T12; BVI learners are divided into two sub-groups: learners with blindness (B1 – B16), and learners with low-vision (L1 – L16).

2.2.1. The Respondents

For this research, the sample groups were formed using so called “snowball” method based on the informal contacts with blind and low-vision/visually impaired students and their teachers, which the author has due to her work at a special school for the visually impaired children. The sample of teachers consists of twelve respondents (n=12) and the sample of BVI learners of 32 respondents (n=32). Considering the general sizes of the target groups, it could be estimated that a significant part of all possible respondents were included in the surveys. The following descriptions of sample groups are based on the data gathered with the questionnaires.

The first group consists of foreign language teachers of BVI learners (12 respondents). Due to the very limited number of EFL teachers of BVI students also the teachers of other foreign languages were included in the sample. Therefore, in addition to seven English teachers, two teachers of German, and the teachers of French, Russian and Swedish were interviewed; also one teacher of Estonian experienced in teaching Russian-speaking blind learners responded to the questionnaire, according to the answer to the question three (TQ3).

It was considered important that both regular and special school teachers of BVI learners would elaborate their experiences. In the sample, five of the teachers were teaching at special schools for the children with visual impairment; six had taught only at regular schools and two of the teachers had taught at language courses for blind learners (TQ4-5). Eight of the teachers were teaching in the current study year, four had taught BVI students in previous years but did not have them in their classes at the moment of the study (TQ2). The experience in teaching FL varied from one to more than ten years and the number of BVI students from one to tens of students (TQ6, see Appendix 3)

Sample 1: foreign language (FL) teachers (T) of BVI learners (n=12) (TQ2-5):

- 8 teaching at basic school, 6 at gymnasium, 2 at courses;
- 5 at special schools, 6 at regular school, 2 at courses for BVI;
- Subjects taught: English 7, German 2, French 1, Russian 1, other 2

The second group consisted of blind (B) and low-vision (LV) learners of English as a foreign language. The total number of respondents was 32. The respondents were found due to personal contacts with BVI learners and by asking the respondents to suggest others for the study. One of the preconditions was that a learner should be able to reflect on his/her learning

experience; therefore the sample was formed from adolescents (the youngest respondent was 14-year-old) and young adults with blindness/visual impairment who were learning English as a foreign language or had learnt it recently (Q2, see Appendix 4 for details).

The main characteristics of this sample are as follows (n=32) based on questions 3-8: 16 respondents with blindness and 16 with low-vision; six respondents were studying at basic school, eight at gymnasium, six at university, one at a language course, other options were mentioned by two respondents; ten of the respondents were not studying at the moment but had studied EFL in previous years. As an average, English as a foreign language was studied nine years (Q7 Appendix 4 Table 4.1)

All 32 respondents were studying or had studied English as a foreign language; German was mentioned by 30, Russian by 20, French by four, and other languages by 17 respondents (For more details see Appendix 4. Table 4.1).

Concerning their studies of English as a foreign language, 32 were studying or had studied EFL at basic school, 26 at secondary school, 11 at university; other options were mentioned by six and courses by one respondent (Q8).

Eight respondents were studying or had studied only at a special school, 11 only at a regular school, and 13 at both a regular and a special school. Therefore, a wide variety of learning experiences could be gathered.

2.2.2. Analysis of the Responses

Responses to the questionnaire are analysed for three groups separately: teachers (T1-T12), learners with blindness (B1-B16) and learners with low-vision (L1-L16). It is important to keep in mind that the aim is not to compare or confront these sub-groups but to describe different situations and different aspects in their variety as seen by different respondents.

Summary of responses can be found in Appendices 3 and 4 presented as the coded answers to the questionnaire.

2.2.2.1. Accommodations used in BVI

In this section, the adaptive accommodations used in foreign language learning are presented according to the answers of foreign language teachers of visually impaired (TQ7; T=12) and visually impaired EFL learners (Q9; BLV=32). The data are provided in Table 1. These data are not comparative in the sense that they do not describe similar situations (teachers teach only part of these respondents).

The results show that half of the BVI learners use e-format course books and other e-format study materials; almost all teachers (11 in 12) have mentioned that BVI students use Braille textbooks in their foreign language classes. The use of audio materials is mentioned both by teachers (10 in 12) and by learners (16 in 32). Two BVI respondents answered that they do not need any kind of accommodation and 19 used extra time.

Table 1 Accommodations mentioned by FL teachers (TQ7; T) and BVI (Q9; BLV)

Accommodations	T n=12	BLV n=32
Course books adapted in e-format	4	16
Adapted e-format study materials	6	16
Study materials in audio format	10	16
Other computer based study materials	5	11
Course books/materials in Braille	11	10
Online study materials	3	7
Study materials in enlarged print	6	6
Personal assistant /assistant teacher	7	6

BVI learners were also asked about their preferred accommodations (Q10). The answers are presented in Table 2. Almost two thirds (20 out of 32) preferred to have extra time, 18 respondents mentioned computers with special software; audio format was mentioned by 10 respondents. About half of the blind respondents (8 out of 16) marked Braille in paper as the preferred medium and seven low-vision learners (7 out of 16) mentioned large print. Among other options mentioned was using a very short reading/writing distance (5-10 cm), but some visually impaired students do not consider it a kind of accommodation. The personal assistant was mentioned only by two respondents (2 in 32) and two did not need accommodations.

Table 2 Accommodations preferred (Q10) by BVI EFL learners (n=32)

Additional time	20
Computers with special software	18
Audio format	10
Computers with regular software	8
Braille in paper	8
Study materials in enlarged print	7
Other (short distance etc)	6
Personal assistant	2
Do not need	2

2.2.2.2. Special Devices in Use

A great variety of special devices can be used for providing necessary technical accommodations in BVI. According to the answers of the teachers to TQ11 (Table 3), Braille type-writers were used by their blind students (11 teachers out of 12) most commonly. At the same time, the use of personal computers was high as well (10 out of 12); nine teachers

answered that their blind students used also Braille displays which indicates to implementation of up-to-date ICT-based special devices. Optical electronic magnifiers and magnifying programs were used by low-vision students. It may be concluded from the results that the teachers are familiar with those modern special devices and their students can use several technical accommodations in their language classes.

Table 3 Special devices used in BLV (TQ11, teachers T, n=12)

Special devices	T n=12
Braille typewriter	11
Personal computer	10
Braille display for computers	9
Screen-reading software	7
Optical/electronic magnifiers	5
Other special/magnifying programs	2
Others	2

Concerning the question of adaptive accommodations such as providing study materials in suitable format, (TQ8; Q11) it can be concluded from the responses of teachers and BVI learners (Table 4) that almost all teachers of visually impaired language learners are adapting study materials for their students. Nine out of 12 teachers did that and 23 out of 32 learners answered that their teachers adapted study materials for them. It indicates that teachers have a special knowledge for doing it. On the other hand, it may be seen as an extra work for them.

Table 4 Study materials adapted by ... , TQ8 by teachers (n=12) and Q11 BVI (n=32)

Study materials adapted by:	Teachers	BLV
Teachers	9	23
Student	1	17
School	7	15
Others	0	5
Assistant teachers	4	3
Parents	0	3

Considering that almost two thirds (23 out of 32) of the BLV learners mentioned that they had adapted study materials on their own for their EFL learning, it may be concluded that the visually impaired have necessary devices and knowledge to do it. However, it also shows that the opportunities for getting adapted study materials from special service providers are limited.

TQ9 and Q13 asked how important/necessary adapted study materials were for BVI language learners. The answers were provided by both teachers and learners using a Likert-type scale where 1 – not important/necessary at all to 5 – very important/necessary. The results are depicted in Figure 1.

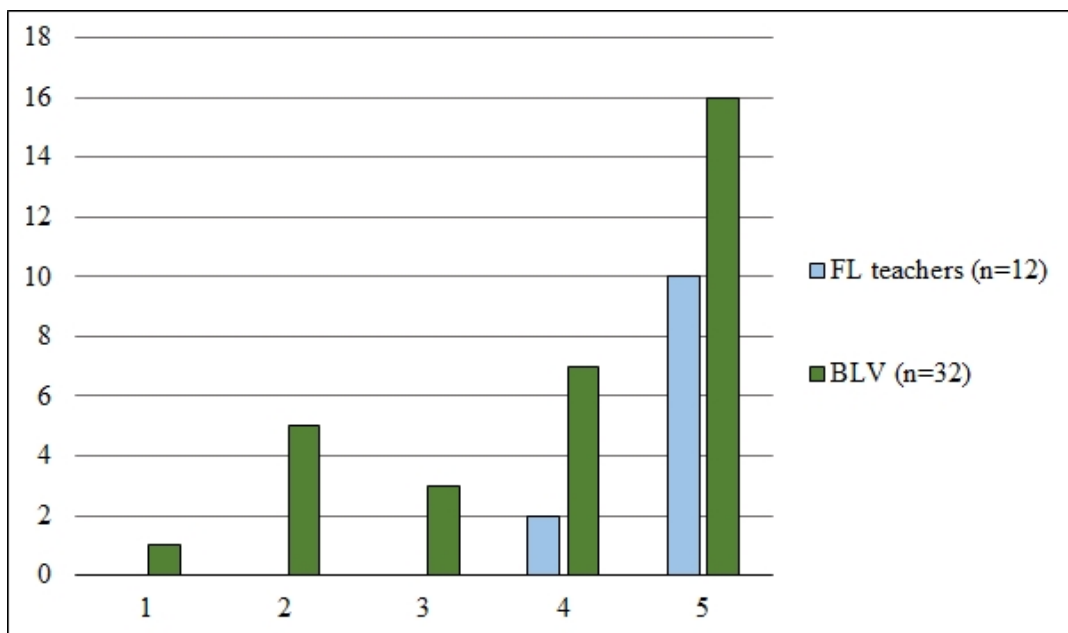


Figure 1 Importance/necessity of adapted study materials in BLV (1-not....5-very)

It shows that all FL teachers consider adapted study materials for their learners with BLV important or very important. The answers of visually impaired EFL learners are more varied. Six of the 32 BVI found it not important or not very important; however, the majority of learners with BLV answered that adapted materials were important or very important/necessary for them.

The other question in this topic area was about accessibility of ordinary/mainstream language learning study materials (TQ10 and Q12). It was answered on a Likert-type scale where 1 – not accessible and 5 - very easily accessible (Figure 2). 12 of the 32 respondents with BLV answered that ordinary study materials for learning English were not accessible to them and 12 answered that they were. Comparing these answers with previous answers it may be concluded that the BVI respondents might have taken into account their ability to adapt the materials themselves. Also the answers of the FL teachers vary here and only half of the teachers noted that ordinary foreign language learning materials were not at all or not accessible in BLV.

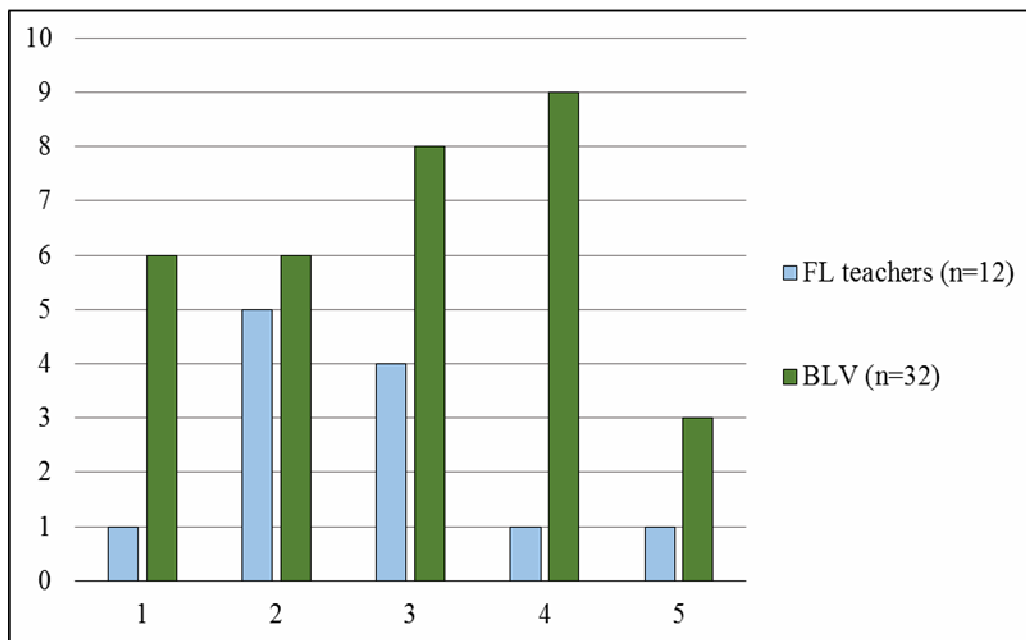


Figure 2 Accessibility of ordinary FL study materials in BLV (1-not ... 5-accessible)

2.2.2.3. Considering Special Educational Needs in BVI Learners

Teachers were asked about their source of information of special educational needs (SEN) of visually impaired students (TQ16). Ten in 12 answered that they had looked for information on their own; six had got information at further training courses, three at universities and two from counselling centres. No one answered that they had not needed or got the information about SEN.

Taking SEN into account was considered very important by 10 in 12 FL teachers of BVI learners (TQ13).

The teachers' answers on the question (TQ14) how much they can take into account their BVI learners' needs were positive: nine in 12 answered that they could take those needs

into account (4 at Likert-scale from 1 to 5), two answered that they could do it completely (5 points at Likert-scale).

On the other hand, it was asked from the BVI learners to what extent they felt that their special needs were considered and met in learning EFL (Q26). The answers (Table 6) show that the respondents' needs had mainly taken into account, only four in 32 learners answered that their needs were considered to minimal extent. From the answers it can be concluded that expressing one's wishes is necessary as 12 respondents pointed out that their needs were met according to their wishes.

Table 6 SEN taken into account in EFL (Q26) answered by BVI learners (n=32)

Accommodations in EFL learning	BLV n=32
Do not need accommodations	3
Taken into account to minimal extent	4
Taken into account to some extent	12
Taken into account according to my wishes	12
Always taken into account	7
Other	2

The BVI learners answered also open-ended question what teachers should take into account in their teaching (Q27). The need for adapted study materials, additional time and understanding about the individual special needs were highlighted by most of the respondents. Also aspects such as teacher's clear pronunciation, avoidance of overloading auditory channel, considering difficulties with acquiring correct spelling, need for systematic ways of teaching (for example not to mix English Braille Grade 1 and Grade 2), making visual information accessible by describing it.

To illustrate the latter aspect, here is the answer of one of the respondents:

- B6. (Teachers should take into account) that a blind student can't see what is written on the board, everything should be clearly spelled out. Explanations using body language are not understandable for BVI; for example, when the teacher says "Apple" and shows it with her hands without any explanation, the meaning is not clear for the blind student. Spelling words letter-by-letter is also important if the pronunciation is different.

2.2.2.4. Activities and Ways of Organizing Teaching/Learning Process in BVI

One of the sub-questions of the research was to find out the promising ways of organizing teaching process in the case of blind/visually impaired EFL learners. For that reason, open-ended questions on that theme were asked from the foreign language teachers (TQ12). Majority of the teachers (nine in 12) highlighted the importance of individual and student-centred approach and considering special educational needs of the learners. Implementing adaptive and technical accommodations pointed out earlier were mentioned here as well. The use of auditory activities was emphasised by six teachers in 12. The list of answers is provided in Appendix 3.

In general, there were quite many answers which suggest to overlap with common activities and ways of organizing teaching process used in foreign language teaching. Activities such as using communicative tasks, conversations, dialogues, actual topics, group-work, pair-work, doing drills and exercises etc. Considering students' interests and emotions were also found essential and that is an important aspect for increasing learners' motivation also in the case of sighted learners. The more frequent answers are provided in the following list.

Ways of organizing teaching by FL teachers of BVI (TQ12):

- Individual student centred approach, considering student's special needs
- Considering students' emotions, interests
- Communicative tasks, actual topics, here and now, conversations etc
- Group-work, pair-work
- Auditory activities, listening

- Adapted materials, special devices, Braille, personal computer etc
- Assistant teacher for younger students, for older students same activities as for sighted students

BVI learners were also asked what kind of teaching has been effective in their EFL learning (Q28). The answers of learners were divided into two sub-groups: one consisted of learners with blindness (B1-B16) and the other with low-vision (L1-L16); detailed answers are in Appendix 4. Both blind and low-vision learners highlighted the effectiveness of practice and communication in class and in real-life situations. Dialogues, conversations, role-plays, simulations etc were mentioned by BVI learners as it was also done by teachers. The learners also pointed out the usefulness of being motivated and encouraged by teachers. It may be concluded that there is an overlap of the teaching techniques and activities used in the case of EFL learners without SEN and with blindness/low-vision.

Concerning special techniques, it may be noticed that in the opinion of blind respondents, more emphasis was put on oral activities. They also mentioned the availability of suitable study materials and developing special skills which enhance language learning, including good Braille skills and computer skills. Learning in very small groups (2-3 students), getting illustrative links between things and words were also mentioned as effective ways of teaching/learning. The balance between speaking, listening, writing and reading tasks was considered important but some specific aspects were also found. For example, long reading tasks were not considered very appropriate but it was quite surprising that also listening tasks were found to be difficult. Just some examples from the answers of blind respondents:

- B9. It's better to do different shorter exercises and tasks than to read long texts. Reading and writing are easier, listening tasks are more difficult - no time to concentrate.
- B11. Communication, telling about own lives and things, practising foreign language is most important, expanding vocabulary in communication, recognizing words while

listening to TV, reading is also useful; written language may be fading side for BVI - that is a problem, it depends how much writing is needed.

B13: Developing Braille reading skills, spelling in Braille; a computer, Braille display and screen-reader help a lot.

B14. There is much reading to do in reality, it's necessary to read the text word by word using a screen-reading program, some words letter-by-letter.

The detailed summary of answers is provided in appendices 3 and 4.

2.2.2.5. Differences in Teaching/Learning EFL in the case BVI

Questions about differences in teaching/learning foreign languages in the case of visual impaired in comparison with sighted learners were asked from teachers (TQ15) and from BVI learners (Q15-16). The responses of visually impaired EFL learners were divided into two sub-groups: B – blind respondents (n=16) and LV – low-vision respondents (n=16). The answers are provided in three lists from the point of view of teachers, blind and low-vision respondents as follows.

Different aspects in teaching BVI learners by the answers of FL teachers (TQ15):

- Pace of teaching/learning is slower in BVI learners than in sighted learners.
- Reading sub-skills are implemented differently due to reading letter-by-letter in linear sequential way.
- Limited use of visual information, need for using descriptions.
- Ways for teaching new words are different.
- Different adaptations and special devices should be used.
- Lesson planning and preparing takes longer time.

Obstacles in FL teaching in BLV by FL teachers (TQ26):

- Impossible or difficult to use visuals, visual information from environment (T1, 2, 5, 6)
- Time-consuming (T1, 8, 12)
- Teaching written forms / orthography by pronunciation (T3, 4, 6)
- Less material available in adapted format (T7, 10, 11)
- Accessibility of physical environment (T11)

Differences in EFL learning (Q15-16) by the blind respondents (B, n=16)

- Need for adapted study materials.
- Not possible to use visual information.
- Learning is more time-consuming.
- Accessible study materials should be provided.
- Reading letter-by-letter.
- Written part is more difficult

However, four blind respondents claimed that there is no difference as it can be concluded from the examples below:

B5: No differences, learning doesn't depend on vision but on brains. Due to technological development, there is no difference whether you are blind or not, everything depends on a person, not on his/her impairment;

B1: Vision is not an indicator, other aspects like memory, language sense, are more important.

There were less differences mentioned by low-vision EFL learners and it was found that „In general, visually impaired learners can acquire a foreign language as much as sighted persons” (L2). The more frequent answers were as follows.

Differences in EFL learning (Q15-16) by the responses of low-vision learners (L, n=16)

- Reading is slower, takes more time (L2, 4, 8, 9, 10, 11, 12, 13, 14)
- Adapted study materials are needed / can't see as sighted can (L2, 8, 15)
- No differences (L1, 2, 3, 6, 7).

It may be concluded that the aspects mentioned by teachers and BVI learners are quite similar.

2.2.2.6. Accommodations Used at Examinations and in Tests

In the questionnaires, there were questions (TQ17-25; Q18-25) about foreign language examinations. Five FL teachers out of 12 answered that their BVI students had taken examinations (TQ17). More than a half of the learners with BLV (17 out of 32) had taken

foreign language examinations (Q18). 15 of them had taken national examinations, seven had taken school examinations, one of them had taken an international examination (Q19). All 17 respondents had taken EFL examinations. In the answers of the teachers, examinations in Russian and German were also mentioned (TQ18).

While answering about accommodations used for examinations, those learners who had not taken any examinations were asked to consider their experiences in EFL tests (Q20). The results are provided in Table 5.

Table 5 Accommodations used in examinations/tests by BVI (Q20)

Accommodations	BLV n=32
Exam paper in Braille	10
enlarged exam paper in print	6
personal assistant	4
exam in audio format	2
electronic format	7
additional time	21
none of those	0
do not need	3
Other	13

The most common accommodation was extended time limit as 21 respondents mentioned additional time; examination paper in Braille (10 responses), electronic (7 responses), and enlarged format (6 responses) were mentioned more often than a personal assistant (4 responses) or audio format (2 responses).

Considering the future plans (Q22), 11 BVI learners answered that they were going to take EFL examinations, four were not and 17 did not know whether they were or not. The types of planned examinations (Q23) were school examinations answered by four respondent,

national examinations by nine, university FL examinations and international examinations both by two respondents.

FL teachers were asked an open-ended question about the accommodations which are necessary for examinations (TQ24). The teachers mentioned the following aspects:

- Additional time;
- Adapted examination papers in a suitable format (Braille on paper, electronic format, enlarged print);
- Adjustments in task format, appropriate layout according to the adapted format, logical structure;
- Use of special technical devices;
- An assistant for a BVI exam-taker.

The teachers were also asked what they thought were the obstacles to taking students' SEN into account and providing accommodations (TQ27). The teachers highlighted the lack of understanding special educational needs and of knowledge how to meet those needs as the main obstacle.

The other aspects mentioned were:

- confidentiality requirements of the national examinations, which do not allow to consult on the basis of concrete tasks;
- some task types are not suitable for presenting in the linear format;
- insufficient technical opportunities;
- the educational system based on fixed criteria.

It was pointed out that there may be no obstacles. One of the answers is given here as an example to illustrate it.

T12: However, if special needs are explained systematically, clearly and sufficiently, and if to be convinced of them, there shouldn't be any obstacles in taking them into account. I'm convinced that considerations and accommodations / adaptations are necessary; otherwise, BVI students are not in an equal situation.

The answers of teachers to open-ended questions are listed in Appendix 3.

2.2.3. Focus Group Interview Results

In this section the results of a focus group interview about accommodation issues at national examinations are provided. Two specialists from Foundation Innove, working in the office responsible for the administration of the Estonian National School-leaving Examinations kindly agreed to participate in a semi-structured interview. The interview consisted of questions about the legislative basis, criteria for providing accommodations, characteristics of accommodations and problems faced.

The respondents considered the theme of special educational needs and accommodations at examinations very important. The legal document in which general principles are stated is Decree N° 59 of the Estonian Minister of Education and Research (Minister 2013). According to the Decree, all students who are registered in Estonian Education Information System (EHIS) as having special educational needs are entitled to the accommodations at examinations. The important explanation by the specialists was that, in principle, the same accommodations should be provided at examinations which are used during study period, and schools should apply for the accommodations and for the approval by Foundation Innove. The problem mentioned was that not all schools are aware of that possibility.

For visually impaired students, accommodations such as extended examination time, breaks, readers, examination papers in Braille or in large print or in the electronic format can be provided. The examination papers in Braille differ from the original examination paper used by mainstream students as the paper is translated into Braille by the Library for the Blind and the original examination paper cannot be given to them due to confidentiality issues. The content of the electronic format and large print examination are similar to the original mainstream examination paper. No parts of the examination paper are omitted for the BVI

EFL exam-takers. However, that might be an option for future discussions, as for example, the planned oral part of the English examination based on the comparison of two pictures cannot be used in the case of blind learners and that task has to be omitted, replaced or changed.

The specialists were aware that the layout of the exam paper should be appropriate to BVI learners' needs. It was mentioned that the layout for the electronic format, but not for the large-print format, was suitably adjusted. They understood that it might be difficult for BVI students to navigate within the exam tasks. It was suggested that personal assistants or readers be used at examinations if that kind of problem would be predicted to happen.

It was highlighted that the official regulations are quite flexible and usually all reasonable accommodations are approved by Foundation Innove. It was assumed that not all teachers might be aware that they could apply for accommodations for their students and it is the schools' responsibility to require that. The insufficient information in schools was considered as the main obstacle to implementing adaptive and technical accommodations at examinations.

2.3. Discussion and Suggestions

The empirical research based on two questionnaires was carried out to answer the research questions and find out two sets of factors: firstly, the aspects of access to information and issues of adapting study materials for BVI students, and secondly, to point out the promising ways of organizing teaching/learning process suitable for BVI learners of EFL. Even though, this research is based on the limited number of respondents, it could be considered reliable as almost all eligible respondents were included into the samples.

2.3.1. Aspects of Accessibility

There are many aspects which are general while accessibility issues of the BVI learners are elaborated. Most of them are driven from the difficulties of transforming visual information into accessible format, whether into aural or tactile. In this survey, the need for considering special educational needs in BVI EFL learners was highlighted. Additional time, adapted study materials and special devices were mentioned as the main means for meeting those needs. However, there were also some answers in which no differences in learning EFL in the case of blindness/low-vision (BLV) were found. These answers may lead to the false conclusion if not clearly stated that in those cases usage of adapted study materials and special aids were already taken as a precondition.

The second major aspect is connected with developing necessary compensatory skills for foreign language learning. Braille skills and computer skills are significant factors here. Keeping in mind sequential input or so-called linear perception of information is also essential. An important aspect highlighted in the results of this survey is that both sub-groups of EFL learners – those with blindness and those with low-vision, pointed out that reading was very time-consuming for them. This finding is in accordance with the data from literature claiming that Braille readers are significantly slower in reading tasks. For example, Veispak's results on reading speed of Estonian blind learners showed that blind readers performed their reading tasks significantly slower than sighted did, in reading separate words, words in context and pseudowords (Veispak 2012).

It has been assumed that the reasons for slower reading speed derive from grapho-phonological reading strategy used by tactile readers connected with sequential input of Braille. Even though some Braille readers are much more efficient than others, the research has supported the assumption that the average reading speed of Braille readers is significantly

(about three times) slower in comparison with reading speed of sighted readers. (Veispak 2012)

There are also some results (Castellano 2005) which indicate that there is no significant difference between students with blindness and those with low-vision while considering the input of information. Comparing that finding with the results of this survey, it may be even assumed that in some situation a proficient Braille user can be even quicker and more successful than a low-vision student who struggles in his/her enlarged text trying to find the word he/she has to read next.

According to the data from this survey, it may be assumed that low-vision may cause similar reading strategies as blindness. The basis for this assumption lies in the practical experience that in the case of magnifiers or very short reading distance, the number of letters in vision field is decreasing remarkably. Therefore, the input of written texts is also sequential, in the case of very strong magnifiers or very short reading distance only letter-by-letter.

Even more similarities may exist between low-vision and Braille reading. It is known that in sighted readers the input of letters happens during the fixation of eye in saccades. In tactile reading, it is described that the input of letters is connected with movement of finger and therefore the processes of acquisition may be different for them (Veispak 2012). While using magnifying devices or short distance for reading, the eye movement might be different from eye movements without vision problems. The technique used in severe low-vision is connected with movement of magnifying device over the reading text, or moving the text in front of the eye. Even though there is no research behind this assumption, it may be speculated that this might cause some similarities in reading strategies between Braille readers

and readers with severe low-vision. It could be supported by the explanation of sequential input with its consequences.

The data of this survey also show that blind/visually impaired EFL learners use and prefer using computers, electronic format and screen-reading software. If screen-readers are used, the reading process is replaced with listening. However, it is still called “reading” by blind and their teachers as well. Therefore, it has to be highlighted that some blind are really fast “readers” but it means that they are able to listen to the text read by synthetic voice of screen-reading software using a high speed. On the other hand, considering that listening is also based on linear sequential word-by-word input, it gives a reason to accept reading-while-listening as “reading”.

From the results provided, it may be concluded that developing good receptive skills, like reading and listening, is the most crucial factor for BVI foreign language learners, even though it might have been assumed that productive skills are more difficult to master. The question of drawing distinctions between reading and listening may be arisen in foreign language examinations as discussed in the third section of this chapter.

The final group of the accessibility aspects could be titled as material designing aspects. The factors which enable navigation between the different parts of the text and ease to find necessary texts are crucial. A use of computers is a promising solution here as well; special markers could be suggested to insert into text to use quick keyboard commands for navigation within the text.

2.3.2. Aspects of Teaching/Learning in BVI

The aspects of teaching/learning process of BVI learners of EFL are tightly connected to accessibility issues. It is obvious when sub-skills necessary for language learning are

scrutinised. It has been suggested that in some cases blind foreign language learners could be even in better position in comparison with sighted learners. It concerns learning situations when listening and speaking skills are mainly used. This assumption is based on the findings that the phonological awareness of learners with blindness may be better in comparison with sighted ones. At the same time, it emphasizes the importance of well-developed listening skills.

There is another crucial aspect connected with importance of listening skills, which might be connected with phonological awareness of blind and visually impaired foreign language learners. Phonological awareness definitely plays a crucial role also in learning new words in foreign languages. It might be assumed that blind and visually impaired learners are in worse situation in comparison with sighted ones as they cannot see the movement of lips which helps to recognize phonemes and make distinction between sounds easier for those who can see it. This obstacle is more evident in English and in other so-called phoneme sensitive languages where words differ due to minor change in one phoneme. For example, in Estonian language, differences in first letter b-p, d-t do not remarkably impede understanding the meaning of the words. In English, on the contrary, the meaning of the word often depends on the change of just one phoneme including distinction between b-p, d-t. The answers of the respondents of this survey highlight the need for clear pronunciation of words in learning stage and eliminating background noises.

The responses also suggest that BVI Estonian, and also those whose mother tongue is Russian find it difficult to acquire the written forms of English words. It could be argued that orthography of English is difficult for all learners whose own first language is alphabetic/orthographic, however, as there is almost no implicit or incidental vocabulary learning opportunities in the case of blindness to obtain spelling of the words, it definitely

increases the importance of phonological awareness in BLV. Therefore, extra attention should be paid on developing phonological awareness and its components.

Moreover, achieving necessary level of comprehensible input, as emphasized by Krashen (1982), may be quite difficult without visual clues. Different kinds of visuals are widely exploited by most foreign language teaching methods. The problems which are connected with the lack of visual clues in teaching/learning process of BVI language learners vary to the great extent. That aspect has to be considered while choosing suitable activities and methods. In addition to the gaps in getting information, the absence of visual input may cause decrease in students' motivation. It is assumed that visual information plays an important role in the acquisition of a foreign language as the information in the target language can be accessed to some extent also unconsciously. The aspects of implicitness and explicitness are connected to the language acquisition and language learning. These aspects would be interesting to elaborate while analyzing the study materials and learning situations for visually impaired learners. It might be predicted that there are less opportunities for implicit or incidental unconscious foreign language acquisition in the case of blindness and low-vision.

In addition to that, the attention has to be paid to the aspects of reading and writing techniques which differ considerably in the case of students with vision loss comparing with students with normal sight. For example, reading skills like skimming and scanning cannot be used as sighted people do which is influential for example in the case of examinations discussed in the next section.

On the other hand, it may be also concluded from the answers of BVI EFL learners and foreign language teachers, that there is an overlap with many of the mainstream activities, methods and ways of organizing teaching process in EFL. Therefore, those are appropriate to

use in the case of BVI learners as well. However, it is definitely useful to discuss with BVI learners about their learning experience and expectation as pointed out by some respondents. Usually BVI learners expect that same standards are set for them as for sighted learners.

2.3.3. Aspects of Testing in BVI

Assessment procedures and testing is an essential part in formal education. It may be concluded that visually impaired foreign language learners take similar tests and pass similar assessments as sighted learners do and usually there is no difference in content of the tests. However, it appeared that there may be differences when the sub-skills are assessed. It mainly concerns reading skills but in the case of blindness and low-vision, reading has its special impact on performing test tasks for measuring listening and writing sub-skills as well.

In the cases when reading and listening skills are assessed, it may be questionable whether reading assessment tasks designed in print are suitable for assessing reading skills in blind using screen-reading software. Although, the mixed character of reading-while-listening should be taken into account, it may be assumed that using screen-readers and listening to synthesized voice, could be used in reading comprehension assessment tasks. However, there is still the question whether using screen-reading software for reading tasks measures reading skills as the performance of the task is based on listening in that case.

Another question derives from the physical design of reading assessment tasks. Due to difficulties of navigation within the text presented in Braille or in synthetic speech or in very large print, reading tasks based on skimming and scanning are very challenging. While using tasks for assessing reading skills based on skimming and scanning it should be considered that in the case of blindness and also in severe low-vision, it may happen that instead of assessing

reading skills just physical/mechanical skills of navigation within the text and specific compensatory skills are assessed using inadequate criteria.

In the framework of this paper the attention was paid to the special educational needs and accommodations at examinations. The adaptive and technical accommodations used by BVI learners were described. It could be concluded that the accommodations suggested by Estonian regulations are quite similar to those provided for example at TOEFL examination. In Estonia, the request for adaptive and technical accommodations is made by schools according to teachers' suggestions. In addition, special educational needs indicated in the Information System of Estonian Education EHIS are taken into account.

However, there are no special guidelines for assessing the scope of special educational needs. Therefore, the implementation of accommodations at examinations depends to a great extent on teachers' awareness about special educational needs and possible accommodations. From the data of this survey, the need for better understanding and awareness about special educational needs of blind/visually impaired examination takers was emphasised by BVI learners, the foreign language teachers and also by the specialists from the Estonian examination centre of the Foundation Innove.

2.3.4. Suggestions for Teaching/Learning EFL in BVI

In teaching BVI foreign language learners, FL teachers should consider several aspects. On the basis of the results of the survey, the following aspects could be suggested to FL teachers as supportive measures in the case of blind and visually impaired foreign language learners.

Firstly, it should be taken into account that reading is more time-consuming and, therefore, also more exhausting for blind and low-vision foreign language learners than for

learners without sight problems. It is suggested to estimate the factor of time while designing and using reading tasks and activities based on reading.

Secondly, even though BVI learners rely upon the auditory channel to a great extent, avoid exploiting the channel too intensively. Ensure that good quality sound is provided and pay attention to background noises, which may be much more disturbing in the case of visually impaired. Moreover, help to develop student's phonological awareness.

Thirdly, it is recommended to be systematic in organizing the teaching process but, at the same time, to use balanced and varied activities. There are a number of activities used in mainstream EFL teaching that are beneficial in the case of BVI learners as well. However, more attention may need to be paid to using realia and feedback from the teacher; more descriptions and explanations are usually needed.

In addition to general knowledge of SEN, try to figure out the special needs of a particular student - discuss with the BVI learner what his/her needs and objectives are before and during the teaching/learning process. Questions about the characteristics of visual impairment may be necessary to consider, including the issues of the BVI learner's copying strategies with blindness or low-vision. If possible, use teaching in small groups of two to three learners.

Therefore, be aware of the BVI learner's individual characteristics and special educational needs caused by visual impairment. Implement necessary adaptive and technical accommodations including ICT-based accommodations in the teaching process and apply for similar accommodations for assessment procedures and examinations.

Finally, while teaching BVI FL learners in the mainstream environment, consider also the needs of sighted group members. BVI learners themselves have pointed out that they do not want to impede other learners.

CONCLUSION

In Estonia, the European inclusive education policy has been officially acknowledged for two decades already. According to the Estonian Education Act (1992) every child, including those with SEN has the right to attend the school nearest to the child's home. In practise, there are also special schools for children with special educational needs. However, it is assumed that after ratifying the UN Convention on Equal Rights of Persons with Disabilities in Estonia, the ratio of children with SEN studying at mainstream schools will increase in coming years.

Visual impairment is one of the conditions causing very specific needs and special measures are necessary to meet those needs. Even though the occurrence rate of blindness and severe low-vision is relatively low - about two school-age children in 1000, special adaptive and technical accommodations are unavoidable for providing an accessible teaching/learning environment in the case of blind/visually impaired learners. Due to their special educational needs also specific activities and ways of organizing teaching process may be necessary to implement.

The aim of this Master's Thesis was to elaborate aspects which influence teaching/learning English as a foreign language in the case of learners with blindness/low-vision. The topicality of the theme has increased also due to the fact that according to the Estonian National Curricula for Upper Secondary Schools and other legal regulations (Ministry 2011b, Minister 2013) an examination in a foreign language will be one of the compulsory examinations starting in 2014. That decision emphasizes the importance of foreign languages, which is definitely true also in the case of BVI learners.

There is no doubt that blind and visually impaired can achieve same foreign language skills that those without sight problems. The ability of acquiring a foreign language is

definitely influenced by individual characteristics and individual differences of learners. However, there are specific factors caused by blindness/visual impairment. It is assumed that learning foreign languages, including English as a foreign language, may be more complicated for BVI learners in comparison with sighted learners. The reasons for possible difficulties and challenges lie mainly in the absence or loss of vision which limits access to information. Therefore, information should be adapted into accessible format and special skills and techniques are necessary to master for using technical accommodations.

That kind of specific knowledge and practical experiences on teaching BVI learners have traditionally been available at special schools for the blind. Considering the above-mentioned trends towards inclusion, and that there have already been some BVI learners at mainstream schools, the need for that kind of information may increase among mainstream school teachers. That was also one of the reasons why the question on supportive measures in the case of BVI EFL learners arose.

In the first part of this Master's Thesis, a theoretical overview was provided on the aspects of teaching/learning English as a foreign language in the case of BVI. After providing some background information on BVI learners, the main topics discussed were: firstly, the influence of visual impairment on EFL acquisition; secondly, the issues of adaptive and technical accommodations in teaching/learning EFL in the case of BVI; thirdly, the ways of organizing teaching/learning process in the case of blindness and low-vision.

In the theoretical part, special attention was paid to the input of information and possibilities to adapt visual information into accessible tactile and aural or large print format. The issues caused by the specific linear and sequential input were discussed. Several studies whose results show that reading tactile Braille takes significantly more time than reading in

print were referred to; the importance of phonological awareness was discussed. Both of those aspects are considered important in foreign languages learning in BVI.

The second part of the paper discussed the empirical study carried out for finding the answers to the stated research questions. The main research question was: how can students with visual impairment best be supported in their learning of English as a foreign language. The sub-questions were determined: firstly, how to enable access to information and study environment/materials for blind/low-vision EFL learners; secondly, what activities and ways of organising the teaching/learning process are most suitable in the case of blindness/low-vision?

For that reason two surveys based on questionnaires were conducted: one among the foreign language teachers of blind/visually impaired learners (n=12) and the other among BVI learners of EFL (n=32) in Estonia. In addition, a focus group interview was carried out with two specialists from the Foundation Innove, the office responsible for administering national school-leaving examinations in Estonia.

The purpose of the survey was to get information about aspects connected with adaptive and technical accommodations and promising activities and ways of organizing teaching/learning process from the point of view from the respondents of both sample groups. Even though, the results based on those data may not be generalized for the whole population of BVI learners of EFL, it may be considered reliable for describing the variety of aspects connected with teaching/learning of foreign language in the cases EFL learners with BLV. Mainly qualitative method was used but some quantitative data were also gathered.

The description of the respondents and analysis of their answers is provided in the chapter of results and analysis. The complete summary of responses of foreign language teachers is given in Appendix 3; and the summary of responses of BVI learners in Appendix

4. In the section of discussion the results were elaborated and aspects of adaptations/accommodations and teaching/learning/testing were highlighted. It is emphasized that according to the results, there is an overlap in BLV specific and mainstream activities and ways of organizing teaching/learning process in use. However, there are also significant differences, even though some of the respondents claimed that there were none. The reasons for that kind of contradiction may be explained with the circumstances where special educational needs are already taken into account and necessary adaptations and accommodations are used as a natural part of EFL learning. In the final section some suggestions are provided on aspects which could be considered promising in teaching/learning English in BVI learners.

To conclude with, this research has given an overview about the problems which blind and visually impaired learners of English as a foreign language may face and which need to be solved for ensuring the effective teaching-learning process of those learners. The aspects connected with accessibility and ways of organizing teaching/learning/testing were highlighted. This knowledge could be used in everyday teaching practice at special schools for BVI students or at regular schools mainstreaming learners with special educational needs caused by blindness/low-vision.

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APPENDICES

Appendix 1 Questionnaire for FL Teachers of BVI

In the text, the questions are referred as TQ and a number of a question.

1. Contact information (name or an e-mail, optional)
2. Have you taught students with blindness/visual impairment (BVI)?
 - Yes, I have, teaching at the moment
 - Yes, I have, not teaching at the moment
 - No, I have not
3. What foreign languages have you taught to BVI students?
 - English / - German / - French / - Russian / - other
4. Have you taught BVI FL learners at:
 - basic school / - secondary school / - university / - vocational school / - language school or courses / - as a private teacher / - other?
5. Have you taught BVI students at:
 - special school for BVI
 - regular/mainstream school
 - special and regular school
 - regular FL courses
 - FL courses for BVI
 - other
6. How many years have you taught BVI students?
7. Which of the following have your BVI students used?
 - Braille coursebooks
 - Other study materials in Braille
 - Coursebooks in enlarged print
 - Other study materials in enlarged print
 - Assistant teacher
 - Study materials in audio format
 - Adapted e-format coursebooks for computer
 - Other adapted e-format study materials
 - online study materials
 - Other computer based study materials
 - Radio programs in foreign language
 - Literature in foreign language
 - None of those
 - other
8. Who has adapted the study materials necessary for your BVI FL students?

- school
- me
- assistant teacher
- student
- student's parents
- adaptations not needed
- other

9. How important are adapted study materials for your BVI students?

1- not at all ... 5- very important

10. How accessible are ordinary FL study materials for your BVI students?

1- not at all, ... 5 - easily

11. Which of the following special aids have been used by your BVI learners?

- personal computer PC
- Screen-reading software
- Braille display for computers
- Other special programs (Openbook etc)
- Special magnifying software
- Optical magnifying devices
- Electronic magnifying devices
- Braille typewriter
- other

12. Which activities/ways/techniques/methods have you found to be effective for teaching BVI students according to your experience?

13. How important is it to consider special needs of BVI learners in FL classes?

1 - not important, ... 5- very important

14. How much can you take into account the special needs of your BVI learners in your everyday practice?

1 - not at all, ... 5 - completely

15. What is different, what is more difficult or easier in foreign language teaching in the case of BVI student?

16. Where and whom have you got advice on teaching BVI learners?

- while studying at university
- at further training courses
- from counselling centres
- looking for information on my own
- haven't got any advice
- haven't needed
- other

17. Have your BVI students taken FL examinations or are they going to do it? (go to page ... based on answer)

- Yes, they have
- Yes, they are going to (directed to the question 22)
- Yes, they have, yes they are going to
- No, they have not, not going to (directed to the question 25)

18. What FL exams have your BVI students taken?

- English / - German / - French / - Russian / - Other

19. If yes, then what kind of EF exams have your BVI students taken?

- School exams
- National exams
- International exams
- University FL exams
- None
- Other

20. How appropriate have the exam accommodations been to BVI students?

- 1- not appropriate, ... 5 totally appropriate

21. What kinds of accommodations/adaptations have your BVI students used for taking exams?

- Braille exam paper
- Enlarged exam paper
- Electronic-format exam
- Personal assistant
- Extra/additional time
- Special devices
- Have not needed
- Other

If your BVI student is going to take FL exam

22. If yes, in which language your BVI student is going to take FL exam?

- English / - German / - French / - Russian / - none / - other

23. If yes, then what kinds of exams?

- School exam
- National exam
- International exam
- university exam
- don't know
- not going to take exam
- other

24. What kind of accommodations is necessary for BVI students at exams?

25. How important is the information on teaching methods and accommodations in FL teaching of BVI student?

1 - not important, ... 5 - very important

26. What kind of obstacles do BVI FL learners face?

27. What influences considering special needs and implementing accommodations at exams?

28. What else would you like to add?

Appendix 2 Questionnaire for BVI Learners

In the text, the questions are referred as Q and a number of a question.

1. Contact information (name or an e-mail, optional)
2. How old are you?
3. Are you studying at:
 - basic school
 - gymnasium
 - university
 - language courses
 - not studying at the moment
 - other
4. Are you with:
 - some vision problems
 - low vision
 - blindness
5. Which foreign languages have you studied?
 - English / - German / - French / - Russian / - other
6. Have you studied foreign languages at:
 - basic school
 - gymnasium/secondary school
 - university
 - language courses
 - on your own
 - other?
7. How many years have you studied each FL?
8. What kind of schools/courses have you studied FL at?
 - special school for the BVI
 - regular/mainstream school
 - regular and special school
 - language courses for all
 - language courses for the BVI
 - other, university etc
9. What kinds of accommodations and special aids have you used in FL learning?
 - textbooks in Braille
 - other study materials in Braille

- textbooks in enlarged print
- other study materials in enlarged print
- personal assistant for learning
- study materials in audio format
- textbooks adapted into electronic format
- other study materials in electronic format
- on-line study materials
- other computer based study materials
- radio programs in foreign language
- literature in foreign language
- additional time
- do not need adaptations or special aids
- other

10. What kind of accommodations do you prefer?

- Braille in paper
- enlarged print
- computer with special software
- audio format
- personal assistant/assistant teacher
- additional time
- computer with ordinary programs
- do not need accommodations
- other

11. Who has adapted necessary study materials for you?

- school
- my teacher
- my parents
- assistant teacher
- me
- do not need adapted study materials
- do not know
- other

12. How accessible are ordinary/mainstream FL study materials for you?

1 - not at all, ... 5 - very easily

13. How necessary are adapted FL study materials for you?

1- not very, ... 5 - very necessary

14. How do you communicate in foreign language?

- communication with native speakers
- speaking via the Internet (Skype etc)
- writing via the Internet
- in foreign language classes
- do not communicate
- other

15. What is different, what is easier or more difficult for you in FL learning in comparison with sighted learners?

16. Is FL learning more difficult for you than for sighted people?

- yes
- no
- do not know
- other

17. Give reasons for your 16th answer (do you find FL learning more difficult compared with sighted)

18. Have you taken exams in FL?

- yes / - no

Your FL exam experiences

19. What kind of exams have you taken

- school exams
- national exams
- international exams
- other/tests

20. What kind of accommodations have you used for exams? (If you haven't taken any exams, consider your tests in EFL)

- exam paper in Braille
- enlarged exam paper in print
- personal assistant
- exam in audio format
- electronic format
- additional time
- none of those
- do not need
- other

21. To what extent have your special needs been taken into account at exams?

- 1 - not at all, ...5 – completely

22. Are you going to take FL exams in the future? (next question depends on the answer, if no/do not know go to the question 26)

- yes / - no / - do not know

Taking FL exams in the future

23. What kind of exams are you going to take?

- school exams
- national exams
- university exams

- international exams
- other

24. In the case you are taking exams, in which foreign languages?

- English / - German / - French / - Russian / - other

25. What kind of accommodations would you need for exams?

26. To what extent have been your special needs taken into account in FL learning?

- do not need accommodations
- always have been
- to minimal extent
- to some extent
- according to my wishes
- other

27. What should teachers take into account while teaching BVI students?

28. What kinds of methods/techniques/activities/ways of teaching have been effective in FL learning for you?

29. Why it might be not possible to take into account students' special needs and make accommodations/adjustments at exams?

30. What would you like to add?

Appendix 3 Summary of Responses of FL Teachers of BVI by questions

TQ6. How many years have you taught BVI students?

- T. English 10+ years, 10+ students;
- T. German 10+ years, 10+ students;
- T. Swedish less than 1 year, 3 students;
- T. French 1 student;
- T. English 2 students
- T. English 3 years 1 student and the other 6 months;
- T. English, Russian 15 years, 10+ students;
- T. English first experience this school year
- T. English 1.5 years, 6-10 students
- T. English 5 years, 1 student;
- T. English 2 years, 2 students
- T. German 3,5 years, 1 student;

TQ12. Which activities/ways/techniques/methods have you found to be effective for teaching BVI students according to your experience?

- T1. Individual, according to student's need
- T2. conversations, dialogues, descriptions, comparisons, word cards, listening, gap filling, rephrasing, situations, role plays
- T3. lots of listening exercises
- T4. audio materials, Braille textbooks, exercises for memory training for learning vocabulary
- T5. For younger students, it's necessary to have an assistant teacher in class, the older are quite experienced and independent, so they can manage with a subject teacher by themselves. A teacher should be aware about what she is doing and describe it more. In general, in the case a student has materials in his/her computer, teaching is same as in sighted child. It's essential to observe that a student can find a correct part.
- T6. listening to words, revision, learning, role plays, dialogues, explaining words, word games, language games
- T7. study materials in Braille
- T8. Individual approach is essential: methods are chosen according to student's visual impairment: whether s/he uses Braille or enlarged print, its font size, which topics are interesting for a student. Listening to songs and learning songs have suited well for blind students.
- T9. Computer, screen-reading software, Braille display
- T10. working in group
- T11. Actual topics, here and now, grammar focus combined with vocabulary focus. Essential to take into account student's emotions, to notice the themes the student is eager to speak about. Speaking, listening, asking questions - staying focused on the theme, expanding the theme; at the same time attention paid to mistakes, explaining mistakes by connecting with rules - grammar in context. While participating actively, it is very important to record the lesson, so that s/he can listen to it later, the recording is context based, not just meaningless

text. In next lesson, it's important to use expressions learnt in previous lesson - to identify phraseological mistakes, possible to correct them, listening tasks at the end of the lesson.

T12. pair work and group work

TQ15. What is different, what is more difficult or easier in foreign language teaching in the case of BVI student?

T1. The tempo of BVI is slower, difficult to find specific information in reading texts, difficult to do some types of written tasks (matching tasks, answer options at the end of a long text, gap-filling and note-taking during listening tasks; possible to read letter by letter and word by word, not to grasp the whole text

T2. different is speed, presenting study materials, necessary to describe and explain pictures in textbooks, different methods/techniques for different students and their simultaneous use

T3. It's not enough just to write new words on the board, it's necessary to spell the words letter-by-letter or present them in Braille or electronic format for computer. Textbooks have to be adapted, in textbooks, a lot of information is in pictures

T4. Writing on black/white board should be minimal, it's not possible to use all visual study materials, every lesson should be prepared in details and if needed, to send electronic additional study material to student a day before, there is less spontaneity in lessons.

T5. Describing pictures is complicated, especially in the case there is no assistant teacher who could describe the picture for the student. One must be able to foresee - it means that it's not possible just to take a text or task right before the lesson because it's not possible to adapt it into Braille so quickly and the student doesn't have it. That's not a problem if the text is available in computer or on the Internet, so the student can open it in his/her computer without problems.

T6. Different: time necessary for grasping the text, learning speed, reading speed. Makes more difficult: necessary to adapt study materials. Makes easier: If a BVI student is very interested in FL learning, if a BVI student is talented, acquires quickly, broad general knowledge.

T7. In regular class, it's necessary to take into account the needs of BVI student.

T8. In a study group, every student is different for example, one of them uses magnifying CCTV, the other a bit large print, but the third needs very large font size, the fourth uses only Braille - therefore, all materials must be adapted individually in accordance to student's needs. It's good to use songs and do listening tasks with blind students.

T9. No particular difficulties, beforehand, it's important to ensure that BVI student has got necessary study materials for the lesson. For testing, electronic format is used, answers sent by e-mail, feedback sent by e-mail.

T10. Necessary to plan lessons for longer time

T11. It is very complicated to use ordinary printed study materials, filling out workbooks, necessary to explain how words are written even letter-by-letter, necessary to understand special needs, use special devices

T12. It is necessary to adapt/adjust or replace certain types of tasks (matching, the position of questions or answer options in reading and listening tasks, the format of gap-filling exercises).

TQ24. What kind of accommodations are necessary for BVI students at exams?

T1. additional time, adaptations into suitable format (Braille in paper, electronic format, enlarged print), special devices, adjustment of task format (place where questions and answer options are presented in tasks, number of answer options)

T2. additional time, adapted materials

T5. Not possible to describe pictures as sighted students do. Additional time should be allowed as it takes more time to do the tasks, especially when it is necessary to navigate (to roll up and down) within the task. Tasks should be understandable and logically structured. Some exam tasks have been quite unclear even for sighted learners.

T6. Text in accessible format (Braille, electronic, enlarged), additional time, enlarged or pictures or descriptions of pictures

T8. Additional time, text in Braille or enlarged, some tasks may need to be changed.

TQ26. What kind of obstacles do BVI FL learners face?

T1. It's not possible or it's difficult to acquire foreign language incidentally/implicitly, impossible or difficult to acquire FL using visual information

T2. abilities; it's difficult to get additional information supportive for FL learning from the environment

T3. Written forms of words are difficult, screen-reading programs are needed which need special knowledge from teachers. However, I do not find that there are big obstacles, the blind have good memory and everything is possible to adapt and ask for advice on technical programs from specialists.

T4. for example, in French, the pronunciation is very different from the written word - it's difficult for BVI students to learn

T5. Situation, where foreign language learning is based on visuals to a great extent, for example, pictures for learning new words.

T6. Matching pronunciation and written forms of words without additional assistance, comprehension of the meaning of words without assistance, tasks based on visual information (describing pictures)

T7. Less material available in Braille (for example, for additional reading, additional materials etc)

T8. Using Braille in FL class is more time-consuming than using ordinary printed text by sighted students. Therefore, Braille users may stay behind.

T10. Adapting study materials

T11. Study materials in accessible format; accessibility of physical environment.

T12. Time limit is the main obstacle - additional time is needed, if not possible, acquisition or doing any types of tasks/exercises difficult.

TQ27. What influences considering special needs and implementing accommodations at exams?

T1. Confidentiality requirements of national exams, due to that, it's not possible to analyse and evaluate adaptations beforehand; some task types are not suitable (finding specific information from long texts, position of answers - too much importance on BVI student's memory, technical skills of using special aids.

T2. educational system based on fixed criteria and norms

T3. technical opportunities, guidance of examination commission provided by a subject teacher

T4. There are often visual tasks at exams (describing a picture, filling out maps etc), which are difficult or impossible to do for a BVI student and s/he doesn't get points for those tasks

T5. Do not know. Perhaps the ability of the examination commission to put themselves into BVI student's shoes, openness to suggestions from assistant teachers and specialists?

T6. If special needs are not understood by persons compiling the exam papers, for example, long reading tasks and position of answer options, in the case of listening tasks, listening, following the task text and write down answers is impossible to do at the same time.

T7. No personal experience, however, if the school has a positive attitude, it's always possible to manage.

T8. Awareness about students with SEN, experience on communication with them, previous exams taken by students with SEN.

T10. Cooperation with INNOVE, time.

T11. Adapting exam papers into suitable format for BVI students, individual approach, extra time, necessary for preparing, adapting and carrying through the exams.

T12. I think that if special needs are explained systematically, clearly and sufficiently and to be convinced of them, there shouldn't be any obstacles in taking them into account. I'm convinced that considerations and accommodations/adaptations are necessary, otherwise, BVI students are not in equal situation.

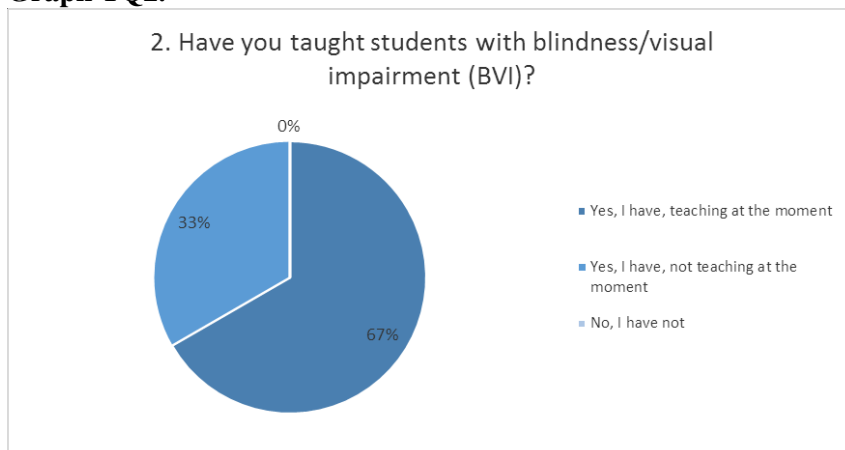
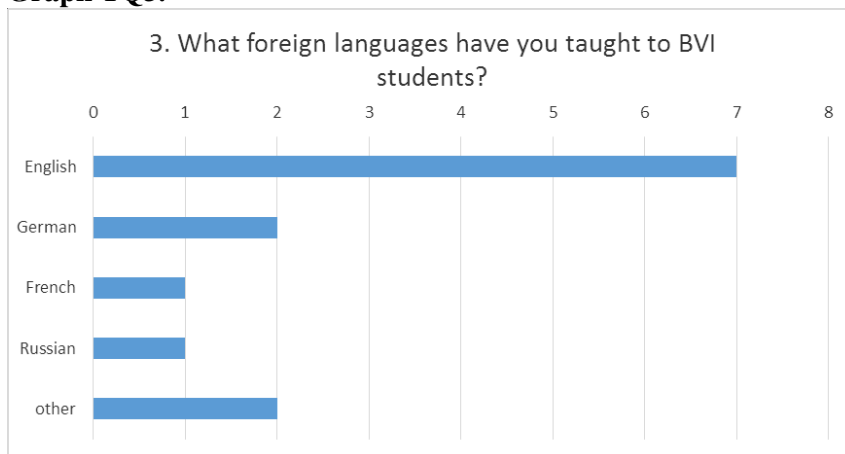
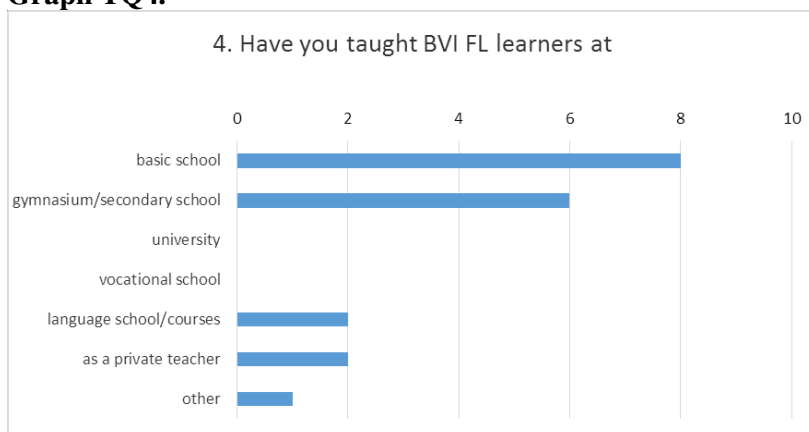
TQ28. What else would you like to add?

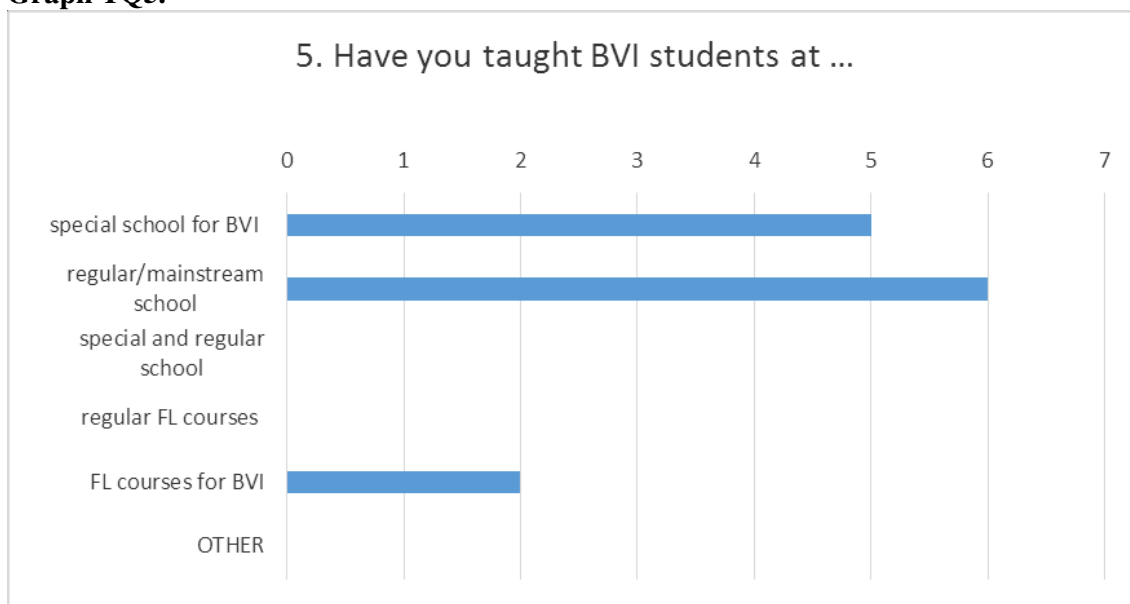
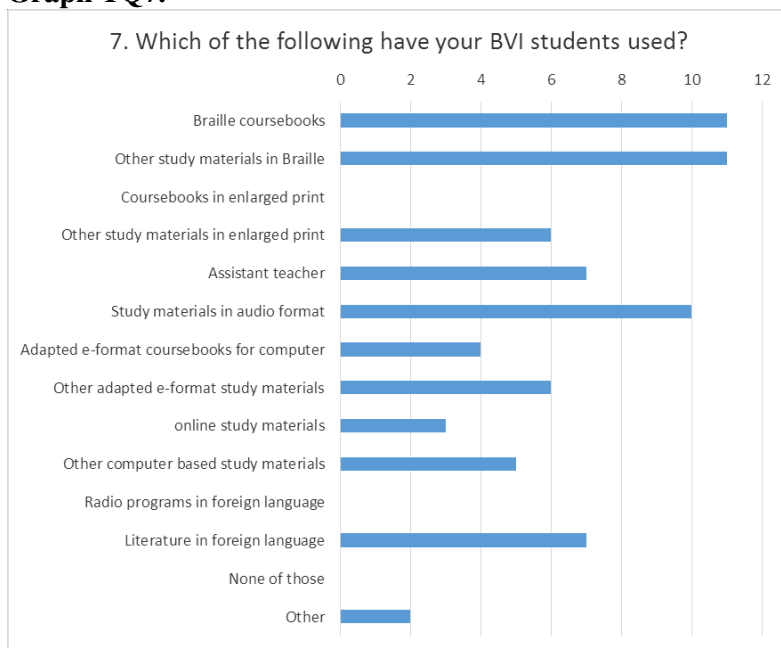
T7. In the case there is a BVI student in class, a new teacher needs a lot of information how to manage in unfamiliar situation, and at least minimal Braille skills are necessary for the teacher.

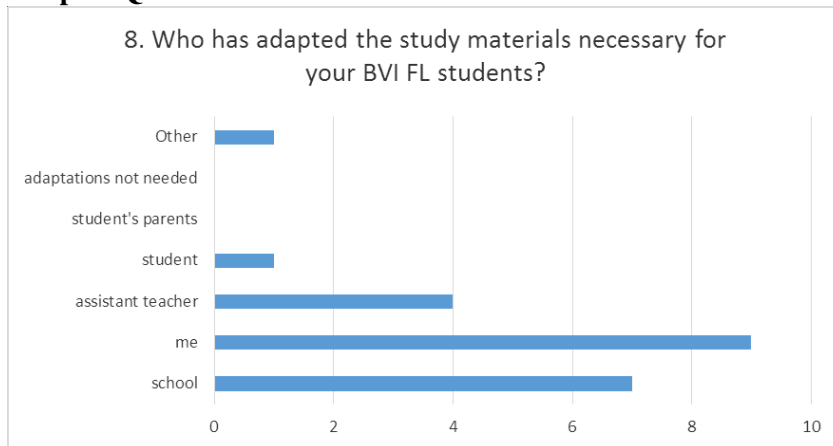
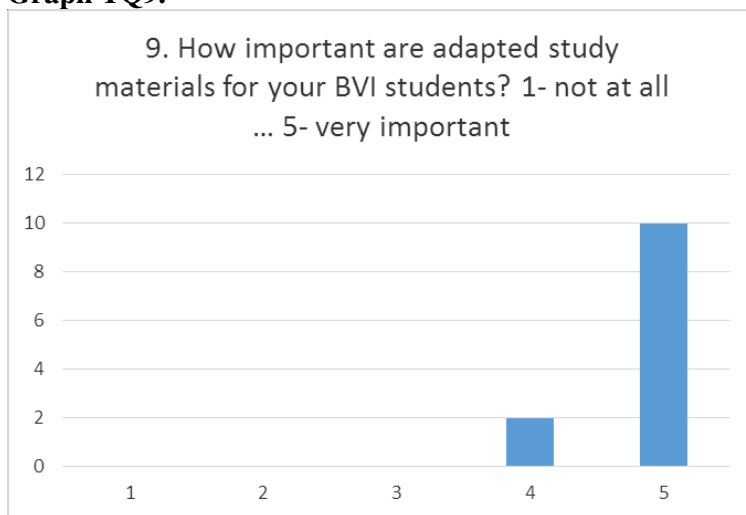
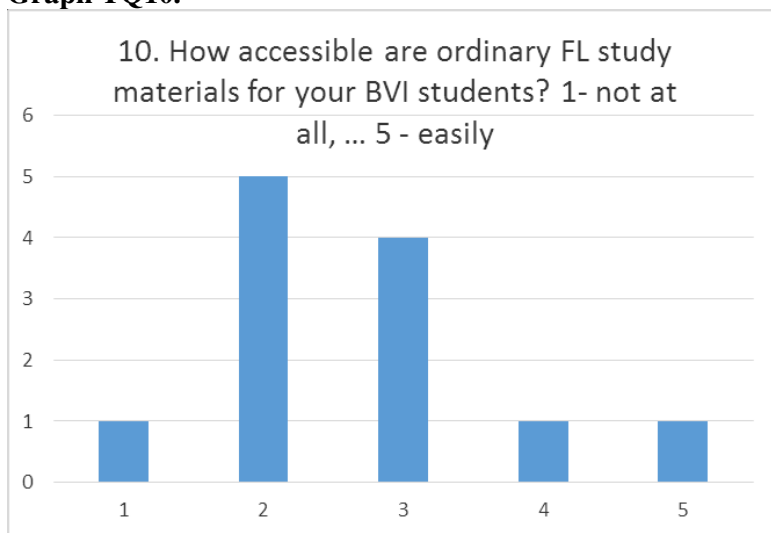
T8. That kind of research is very necessary as it helps to increase awareness about special educational needs.

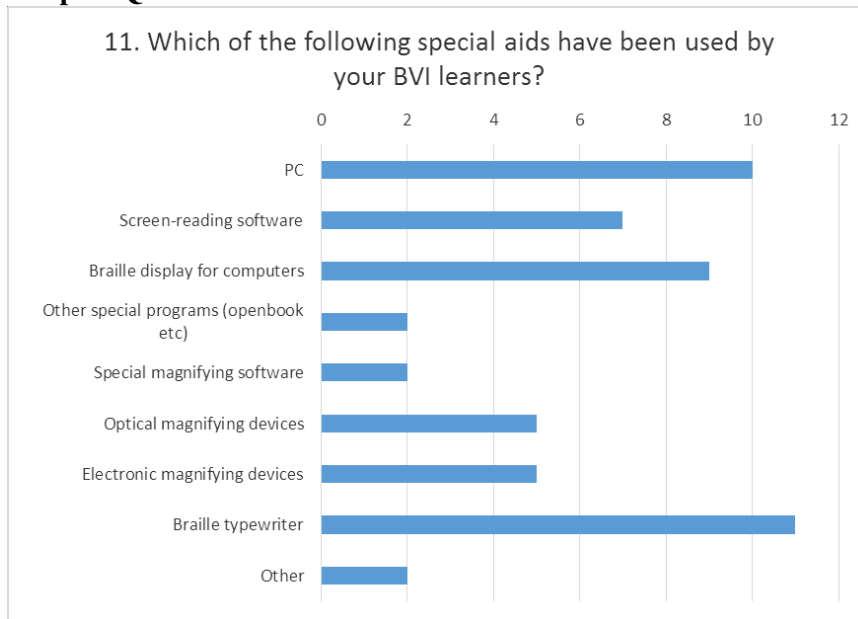
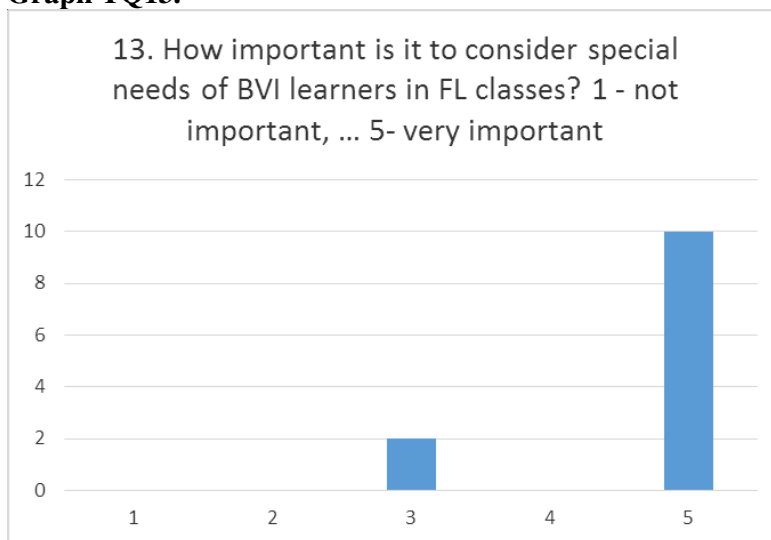
T11. Adaptations/accommodations are very necessary.

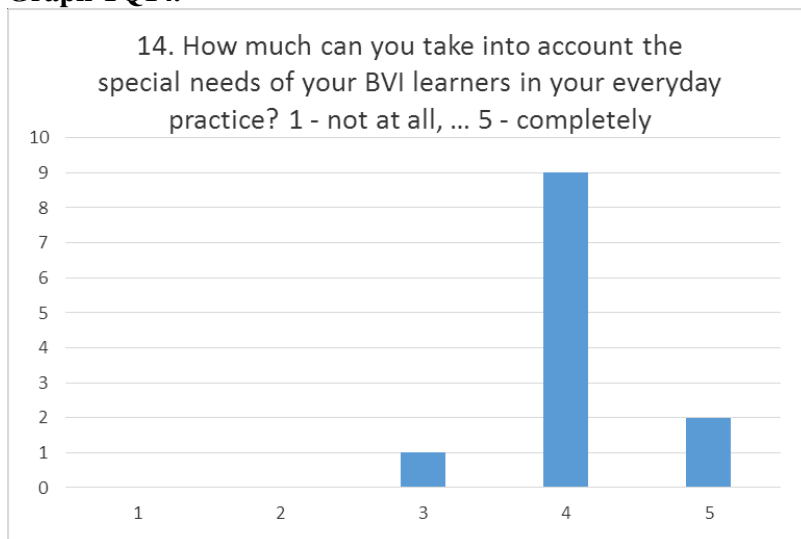
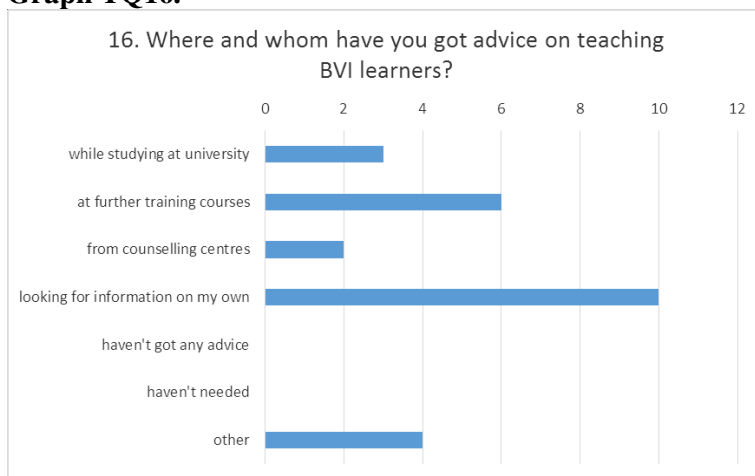
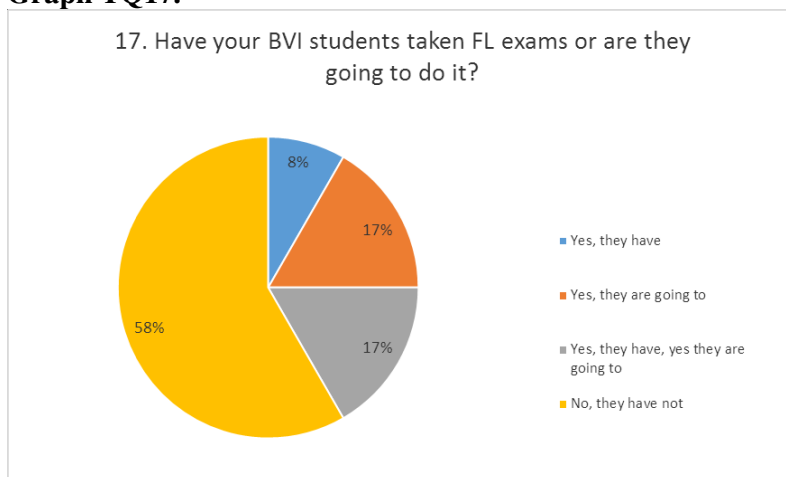
T12. It is important to point out special needs of BVI students to those who are responsible on preparing study materials and exams. I've studied testing, therefore, I have this opinion.

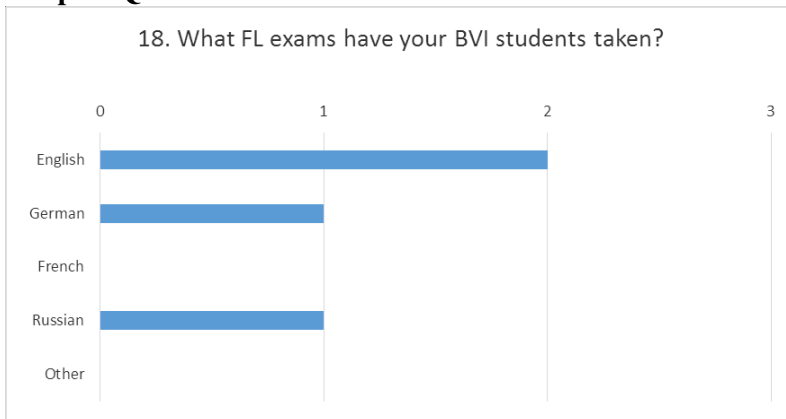
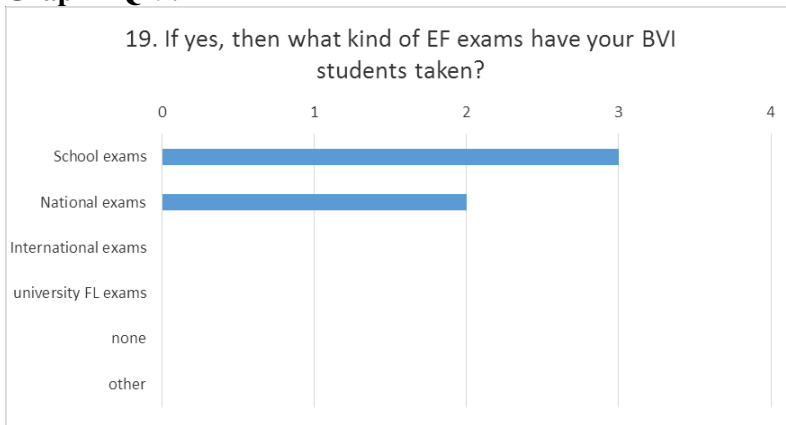
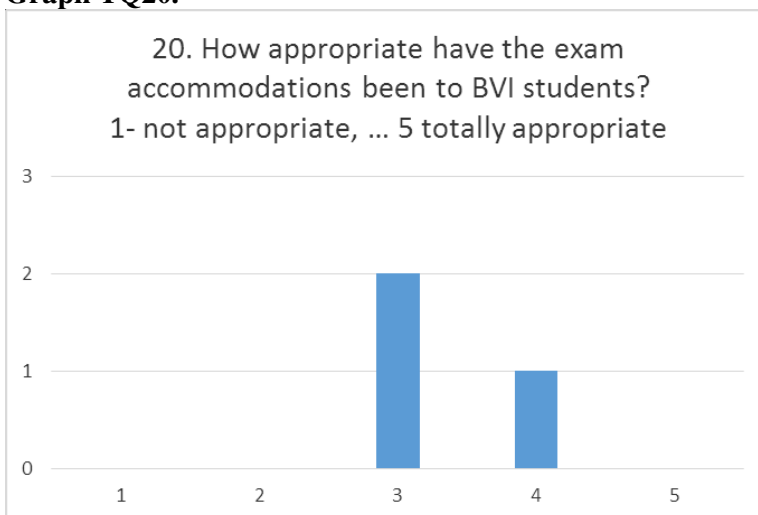
Graph TQ2.**Graph TQ3.****Graph TQ4.**

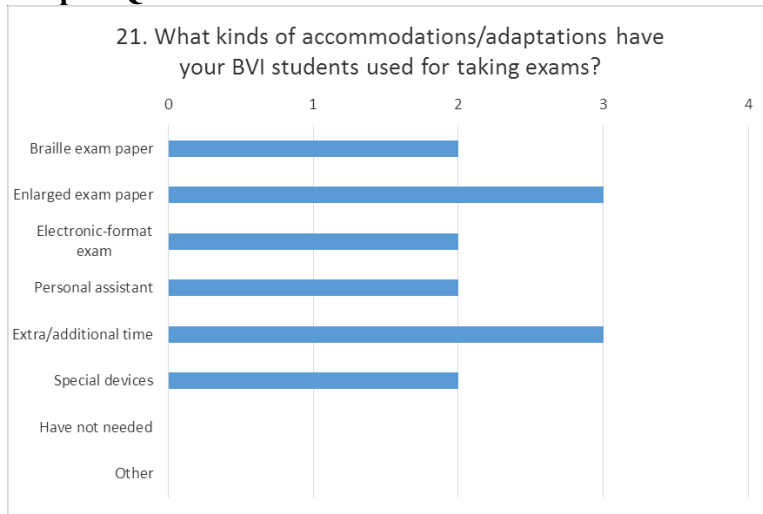
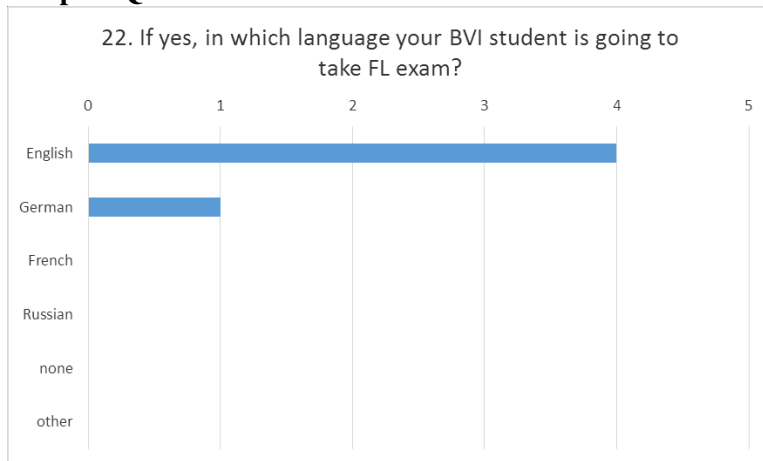
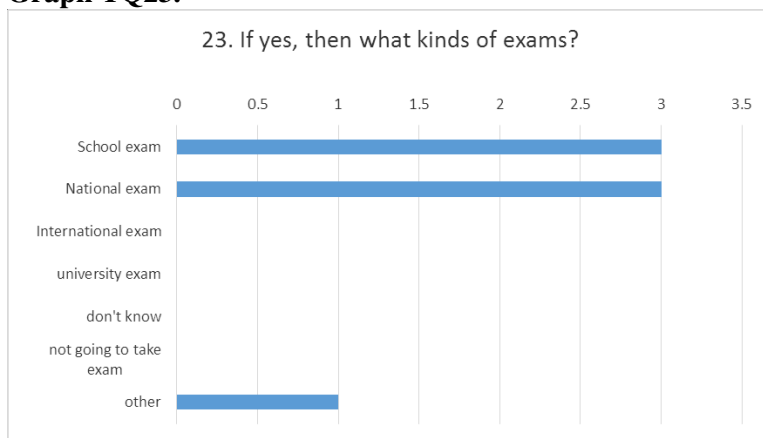
Graph TQ5.**Graph TQ7.**

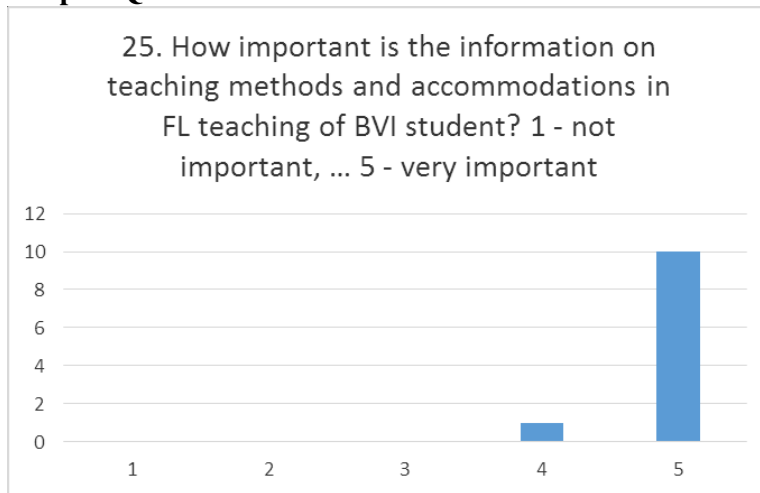
Graph TQ8.**Graph TQ9.****Graph TQ10.**

Graph TQ11.**Graph TQ13.**

Graph TQ14.**Graph TQ16.****Graph TQ17.**

Graph TQ18.**Graph TQ19.****Graph TQ20.**

Graph TQ21.**Graph TQ22.****Graph TQ23.**

Graph TQ25.

Appendix 4 Summary of Responses of BVI learners by questions

Table 2.1. Respondents (Q2,4,5) BVI learners (B- blindness; LV- low-vision).

LV	English	German	Russian	Other	Age
L1	10	2	4		18
L2	6	2	6		17
L3	10	5	2	1_fi	18
L4	10	3	7	1_sp	22
L5	12	8	2		20
L6	8				15
L7	6	3			14
L8	7	4			16
L9	6	3			17
L10	9	3		6_fi	16
L11	11	8		1_fi,fr	26
L12	5				21
L13	11	6			19
L14	7	1	7		24
L15	17				22
L16	10	6			27
Average	9.1				19.5
Count				4	
B	English	German	Russian	Other	Age
B1	11	8	mt		26
B2	9	6	1	1_sw	18
B3	10	7	1	1_da	23
B4	10	4			26
B5	12	8	3		26
B6	11		6	2_fr	18
B7	11	8	2	1_sw	20
B8	10	6	mt		21
B9	6	3			15
B10	4				34
B11	8		mt		33
B12	2	8		1_fi	42
B13	11	2	12	2_fr	31
B14	6	2	mt		30
B15	8		mt		26
B16	12	7			24
Average	8.8				25.8
Count			5_mt	6	

Q15. What is different, what is easier or more difficult for you in EFL learning in comparison with sighted learners?

B1. makes easier: good sense of language, interest; more difficult: need for accessible study materials

B2. being blind

B3. Can't say, what makes it more difficult. Can't see the blackboard but if necessary, my lecturer reads what there or sends it later by e-mail. Beneficial is writing on computer's keyboard which is a bit quicker.

B4. difficult because it's not possible to use visual information, which is used a lot in language learning, good auditory and tactile memory are beneficial

B5: There is no difference, learning doesn't depend on vision but on brains. Due to technological development, there is no difference whether you are blind or not, everything depends on a person, not on his/her impairment;

B6. The teacher writes new words on the blackboard but often forgets to spell those letter-by-letter

B7. more time-consuming, the pronunciation and written forms of words are different - more difficult to acquire written language

B8. difficult to learn how to write words by pronunciation, study materials have to be adapted, more time-consuming; helpful: good memory, interest

B9. study materials are a little bit different (no pictures), it makes easier that I like languages, can remember easily

B10. I benefit from screen-reading software JAWS, I need additional time for converting texts, no difference in direct communication

B11. written part is complicated due to different pronunciation, it is beneficial to study FL with sighted learners as the speed/tempo is quicker there, good auditory memory, possibility to record, however, sighted learners can remember while writing - blind people miss it, lots of effort on adapting study materials, lots of resources are spent on me, I don't want to inhibit the tempo of other learners, individual lessons are good, individual approach, willingness to learn helps

B12. difficult: to get accessible study materials, can't keep in pace with other learners at courses, there is nothing what makes it easier

B13. accessibility of study materials, it's not possible to adapt all parts of study materials

B14. listening helps to concentrate, at the same time, background noises make it more difficult, need to select sounds (voices), more time-consuming, need for accommodations and adaptations

B15. sighted people can see written words, blind have to read words letter by letter, it is possible to read words letter-by-letter using screen-reading programs, also word by word while listening, Braille display is useful

B16. It's more difficult to get study materials because I need adaptations. It's also more difficult to find translations for some words in FL on the Internet.

L1. nothing

L2. A sighted person can see texts, BV must adapt texts and that is time-consuming

L3. I spend time communicating with native English speaking people via the Internet

L4. The worst is reading and even worst are exercises based on texts. Reading is very time-consuming

L5. Smaller classes

L6. nothing

L7. nothing

- L8. need for adaptations/accommodations, magnification; working with special devices takes more time; difficult to find a word from the text.
- L9. Learning pronunciation with phonetical signs; reading more time-consuming
- L10. Reading is slower, more attention needed
- L11. It may take longer to study and do exercises
- L12. It may take more time
- L13. I'm reading slowly
- L14. I've acquired FL as a sighted person, it helps now while learning, better to remember, learning new words by studying them letter-by-letter is very exhausting and annoying: the first part of the word may be forgotten while reaching to the end, better Braille skills are essential, more time-consuming, listening to audio books in FL is useful, speaking is easier
- L15. Can't see study materials as sighted can:)
- L16. If a teacher writes on the board and doesn't tell what she has written there. I try to be as attentive as possible in lessons and not to miss necessary information. It may be that I can remember better as I don't write automatically from the blackboard but think things through.

Q17. Give reasons for your 16th answer (do you find FL learning more difficult compared with sighted)

- B1. vision is not an indicator, other aspects like memory, language sense, are more important
- B2. It's easier for sighted people to grasp the text in its hole at a glance and get an overview
- B3. see 15th answer
- B4. lots of visual information in FL learning, shortage of suitable study materials
- B5. due to technological development, there is no difference whether you are blind or not, everything depends on a person, not on his/her impairment
- B6. In the case all study materials are adapted and a teacher takes special needs into account, there is no difference whether you are blind or sighted. At the same time if there is no adapted study materials and needs not considered, there is a huge difference.
- B7. not possible to learn using films etc
- B8. most depends on a person's wish, impossible to compare as I've never tried how does it feel to learn using vision
- B9. I'm able to work as productively as others, good Braille skills are essential
- B10. see 15th answer
- B11. depends on a teacher, environment, opportunities to practise, watch TV if there is anyone who can help with translation
- B12. visual part is not accessible/available, pictures are not accessible etc
- B13. Quite equal, depends on a person
- B14. It is more difficult, but helps dedication, attention, concentration
- B15. Oral part may be even easier, written part is more complicated
- B16. It's more difficult to get study materials because I need adaptations. It's also more difficult to find translations for some words in FL on the Internet.
- L1. There is no differences for me
- L2. In general, BVI learner can acquire FL as much as sighted persons.
- L3. I used to study at regular school (*now at special school) and I could manage well in English there. English is my favourite subject and I'm quite good at it. I had difficulties in Russian as I couldn't understand it really.
- L4. In learning FL, there are lots of exercises and reading tasks. It's a huge burden for eye and language learning may become unpleasant - who would like to torture herself. However, if there is interest and a person is focused on target, it's possible to manage well with everything.

- L5. Because vision doesn't have such an important role in FL learning, in the case all necessary texts are adapted according to student's needs..
- L6. don't know
- L7. My English is as good as my sighted friends' English
- L8. I can do same things, however, slower
- L9. don't know
- L10. more time-consuming
- L11. depends on tasks, sometimes it takes longer to do something
- L12. everything depends on what you want
- L13. Person with good sight can work through much more text than person with low-vision
- L14. Easier when you already have basic knowledge; difficult to self-assert yourself as people tend to think that you are not able, offer easier options.
- L15. Same as 15th
- L16. Learning is very individual, especially concerning languages, Whether they stick on you or not. Certainly, it's easier when teacher takes your special needs into account, but I don't need big accommodations.

Q25. What kind of accommodations would you need for FL exams?

- B2. additional time, audio format
- B6. Exam paper adapted into electronic format for computer, no tasks like comparing pictures. Additional time is also necessary.
- B9. descriptions of pictures provided, text adapted into electronic format, reading text in Braille in paper, additional time
- B10. Computer or audio support and additional time
- B13. a reader, audio format
- L1. no need
- L2. Exam on computer and in enlarged text. Additional time is also necessary..
- L3. To use a computer and additional time.
- L5. Additional time and graphs, pictures in enlarged format.
- L6. More time
- L7. don't need
- L15. Whether enlarged print or electronic version. The last one is more convenient.

Q27. What should FL teachers take into account while teaching BVI students?

- B1. take into account student's individual special needs
- B2. poor sight, special needs
- B3. Adapt study materials into Braille or e-format. E-format is more reasonable. After scanning, it's also necessary to recognize the text. It has happened that I have to do it myself, and even though I can manage with it, it's too time-consuming and I think that study materials should be adapted for me.
- B4. At beginners level, a FL teacher should know learner's mother tongue and give explanations in it. Not to rely too much on learner's hearing - listening is tiresome and exhausting, there should be a balance between listening, reading, writing and speaking. Teachers should follow a certain system, not to jump from English grade 1 to grade 2 (shortened form)
- B5. It should be kept in mind that teachers are responsible on adapting study materials and not students, and that it may take longer for BVI in comparison with sighted learners.

B6. (Teachers should take into account) that a blind student can't see what is written on the board, everything should be clearly spelled out. Explanations using body language are not understandable for BVI; for example, when the teacher says "Apple" and shows it with her hands without any explanation, the meaning is not clear for the blind student. Spelling words letter by letter is also important if the pronunciation is different.

B7. adapting study materials into suitable form

B8. it takes more time for BVI, a computer with special programs and Braille display are necessary

B9. Not able to do everything quickly, additional time, assistance for describing pictures

B10. Necessary are: clear pronunciation (dictation), regular oral feedback during tasks, additional time

B11. Additional time, meet before courses, discuss about expectations, negotiate which formats are suitable for study materials; possibility for recording, ask permission from group members, typing may disturb others, slower pace may inhibit others. Better to have individual lessons .

B12. that it takes more time, study materials should be adapted, small groups (2-3 persons), it's difficult to acquire written forms, Braille displays are useful

B13. that a BVI student doesn't get all information, can't use blackboard, give study material beforehand, reading Braille is more time-consuming

B14. make agreements, individual approach, individual work, every BVI is different, needs additional time

B15. BVI needs more explanations, in-depth approaching

B16. That a student may need adaptations and that learning may take more time

L1. That text on blackboard or in course book may be hardly seen.

L2. It takes longer for a learner to do his/her works. It is very tiresome for eyes to work long.

L3. can't tell

L4. It may take longer for a visually impaired student to read all kind of texts and do exercises.

L5. Reading speed may be slow and that more time is needed.

L6. don't know

L7. don't know

L8. to take students' needs into account

L9. to take into account student's special needs and wishes.

L10. working process is slower

L11. takes more time, explaining individually if needed

L12. the quantity of study material

L14. shouldn't just let through because a student can't see (for example at university language courses), apply for experts for getting advice, to try to understand special needs, consider that extra time is needed, that it's not possible to use pictures etc.

L15. That he acts slower and asks much more than an average sighted person.

L16. Individual approach to students. A teacher should find out what kind of language learning difficulties the student has and take those into account in teaching. Everything written on board should be repeated orally.

Q28. What kind of teaching methods/techniques have been effective in FL learning for you?

B1. dialogues, discussions, conversations, simulations of real-life situations - would have liked to have those more.

- B2. Communicating with class mates, Braille texts in paper or on Braille display, listening to tasks twice
- B3. interactive tasks
- B4. Balance between reading, writing, listening, speaking; new words in Braille
- B5. FL environment is the most effective but it's not possible in our school programmes
- B6. conversations
- B7. reading Braille and translating
- B8. encouraging, motivating
- B9. It's better to do different shorter exercises/tasks than to read long texts; reading and writing are easier, listening tasks are more difficult - no time to concentrate
- B10. There are good audio study materials and PC programs also suitable for BVI students, adapted study courses. I point out that additional time and aural repetition are the most important aspects
- B11. Communication, telling about their own lives and things, practising FL is most important, expanding vocabulary in communication, recognizing words while listening to TV, reading is also useful; written language may be fading side for BVI - that is a problem, it depends how much writing is needed
- B12. CD records for repeating sentences, learning in context, reading literature is very useful at certain proficiency level, also watching films
- B13. developing Braille reading skills, spelling in Braille; a computer, Braille display and screen-reader help a lot
- B14. There is much reading to do in reality, it's necessary to read the text word by word using a screen-reading program, some words letter-by-letter.
- B15. conversation, motivation
- B16. Audio learning, Braille textbooks in paper, dictionaries accessible on the Internet. I definitely need assistance - personal assistant.
- L1. Being in real situations where it's necessary to use FL: communicating in FL, reading in FL.
- L2. Communication in FL. Expanding vocabulary (but not in big chunks in one lesson, better less but more often). Writing essays, presentations.
- L3. can't tell
- L4. communication
- L5. using computer
- L6. don't know
- L7. Those in use currently
- L8. communication in FL, speaking exercises
- L9. oral communication, everyday situations
- L10. speaking tasks, free communication, not stuck to text.
- L11. Using FL in practice
- L12. Practising
- L13. Learning by heart theme-based expressions and words, answering by heart, writing tasks, forming sentences.
- L14. practising, communication with native speakers, participating in international camps.
- L15. can't tell
- L16. Creating links between things and words. Revision. Oral work, communication in FL.

Q29. Why it might be not possible to take into account students' special needs and make accommodations/adjustments at exams?

- B1. just don't take the trouble, don't understand completely why accommodations are needed, how well the needs are justified
- B2. Students with SEN are sometimes not noticed
- B3. ignorance, lack of knowledge of SEN
- B4. ignorance about SEN, problems with adaptations
- B5. an average person doesn't know that there BVI people do exist
- B6. People are not aware about BVI people, their abilities and needs
- B7. too extensive curricula, problems with adaptations
- B8. shortage of special aids, lack of information
- B9. people's ignorance
- B10. Technical devices in regular/mainstream schools, teachers' ability to be flexible
- B11. Not enough competence, at universities in the USA it's possible to take exams in Braille, a reader may be necessary as well, it's possible to take TOEFL in Braille but no information whether it's possible to use a reader or a personal assistant (it's important that the reader's style is familiar to a BVI.
- B12. Not enough information which possibilities are available in practice, attitude
- B13. don't know, problem with adapting exam papers into Braille
- B14. very time-consuming; also the room should be accommodated
- B15. not enough experience, not suitable format (e.g. Information in columns - difficult to on computer, necessary to understand what-where-why is necessary
- B16. There is often no knowledge what kind of accommodations are needed, what would be the most efficient. In addition, there is simply no people who can do it.
- L2. don't know
- L3. can't tell
- L4. Lack of experiences in the field of visual impairment, technical devices, ignorance towards people with special needs, teachers being not interested how a student can see or what is wrong with his vision (it's assumed that enlarged print solves problems)
- L5. Don't know, perhaps if they don't have devices or there are problems with making accommodations/adaptations
- L6. don't know
- L7. don't know
- L8. don't know
- L9. don't know
- L10. interests of other students are more important
- L11. I haven't experienced any difficulties while taking exams.
- L14. In the case I've explained what I need, I have got necessary accommodations; sometimes, I can't explain all my needs, I've taken oral exams for example at university.
- L15. There were no obstacles when I took my exam.
- L16. It might be that they don't understand how badly (how much) a student needs accommodations and adaptations for getting better results. Sometimes students are not able to express their needs clearly enough.

Q30. What would you like to add?

- B8. I'd like to learn Greek and Latin, trying to find study materials on the Internet
- B10. Thank you for asking

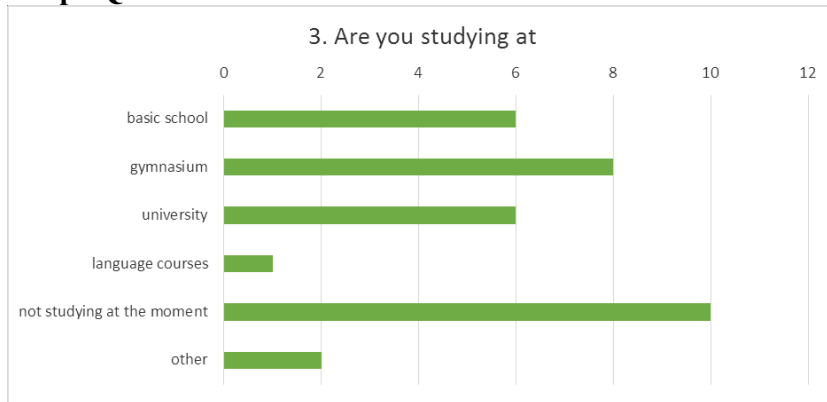
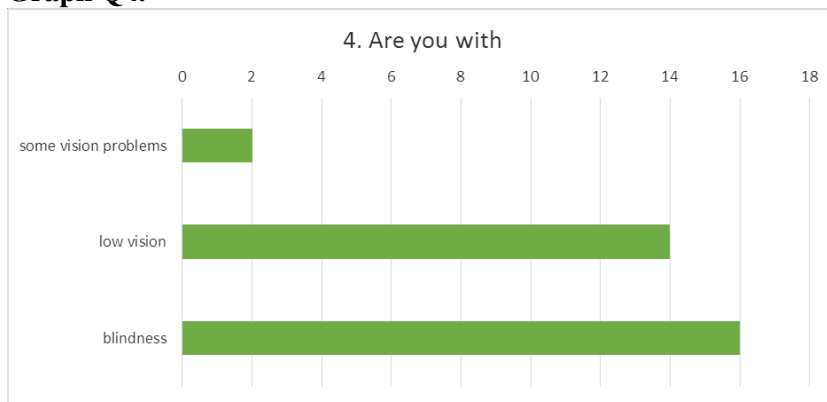
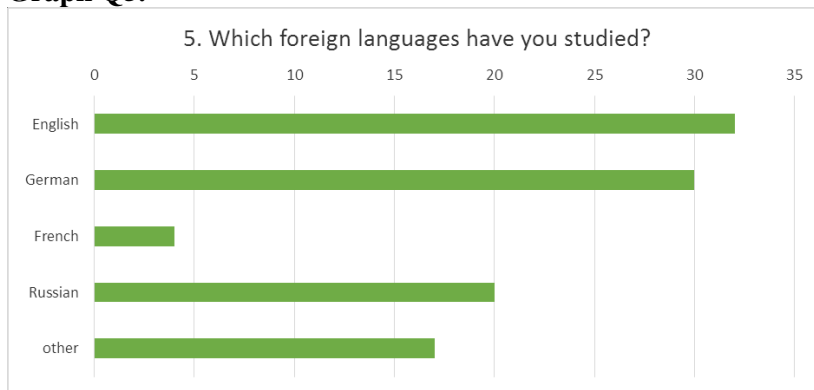
B11. I wish that there would be more FL learning opportunities for BVI people, our FL learning is quite limited, FL courses are very expensive

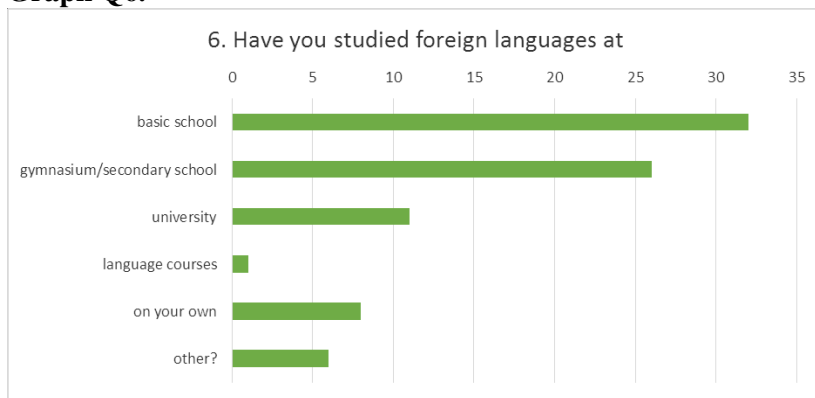
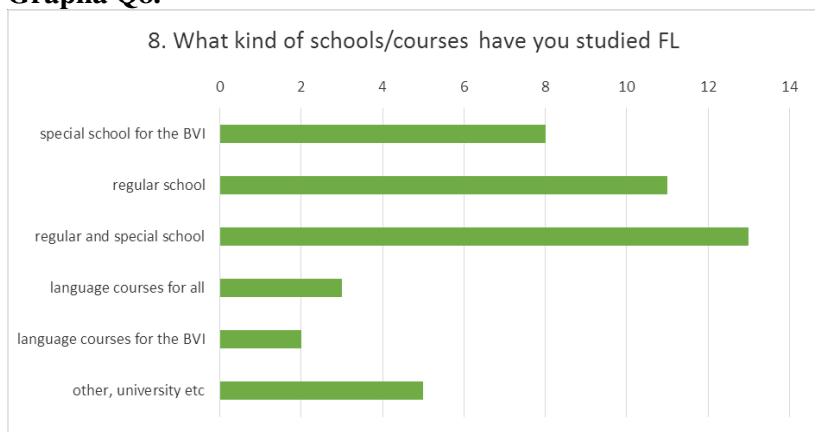
B13. The noise made by my Braille typewriter was annoying at university, therefore I preferred recording

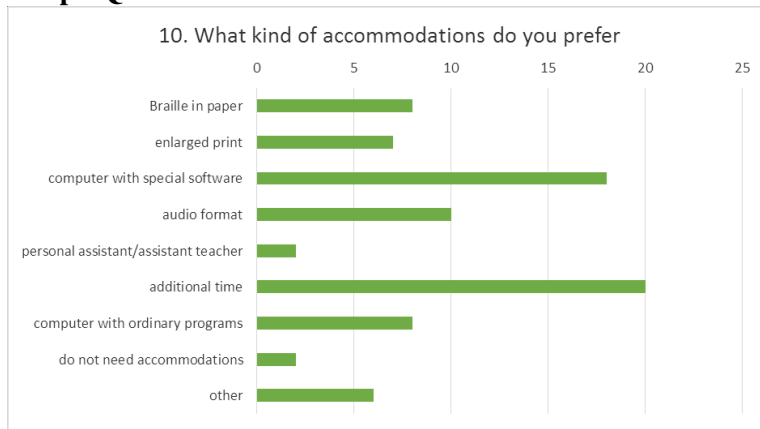
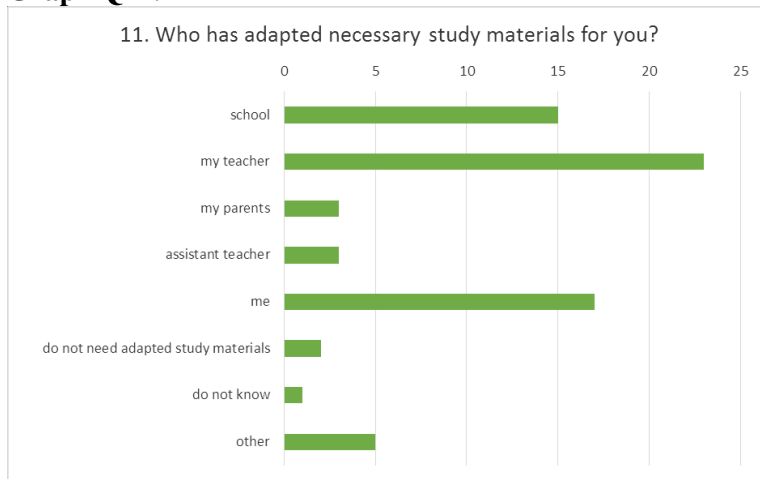
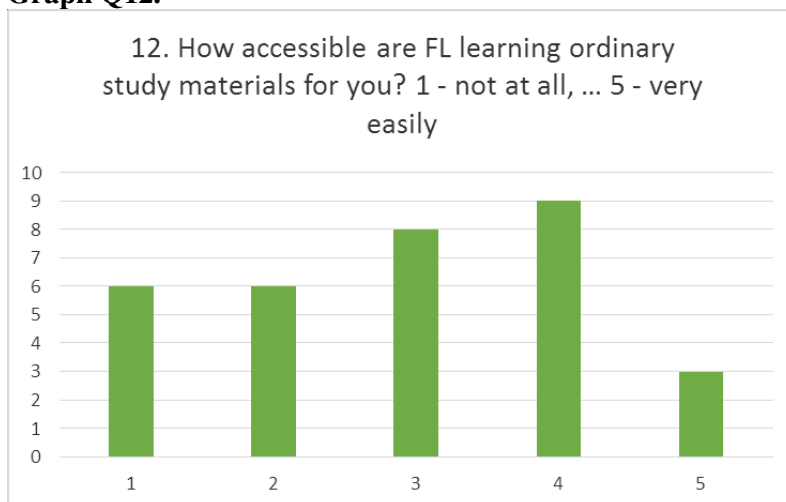
B14. It's very good to speak some foreign languages, good to communicate in everyday life; I'd like to learn Finnish but I don't know how to begin - on my own or at courses

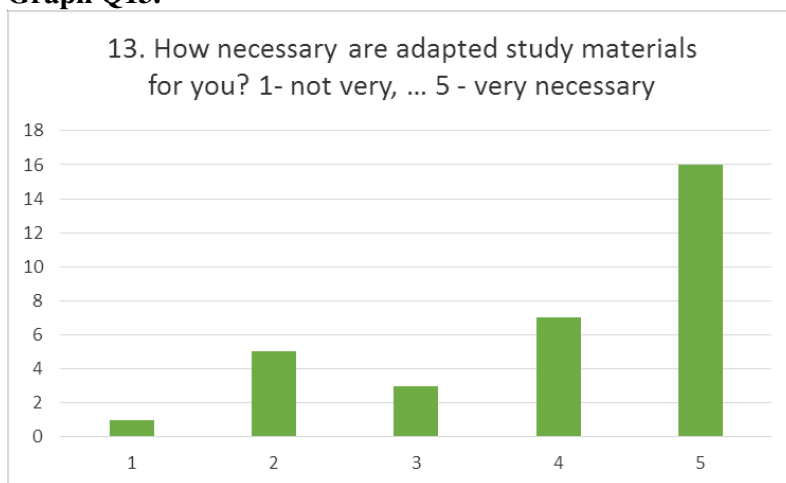
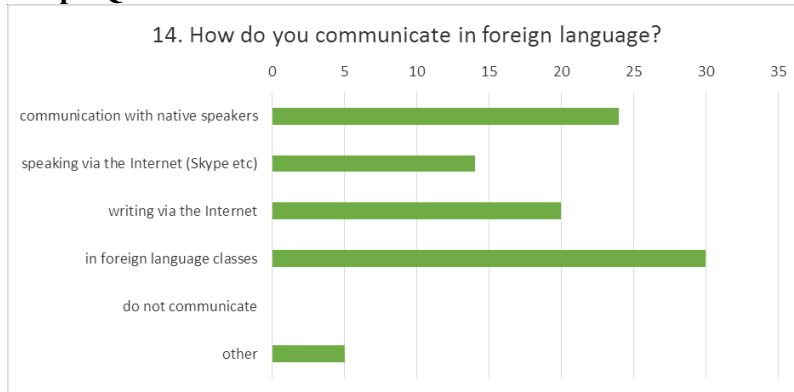
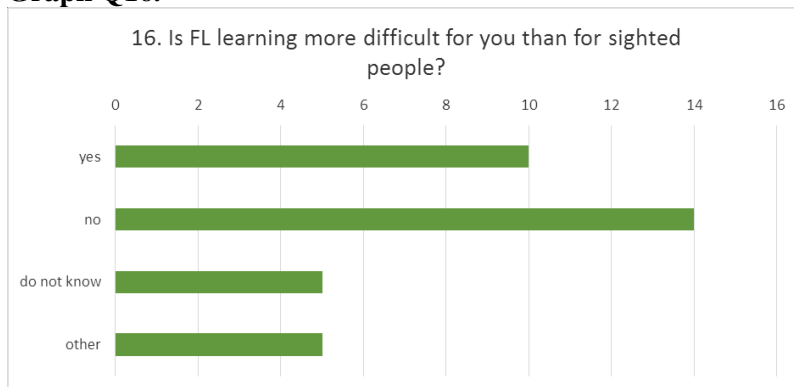
B15. Look for advice before starting with adaptation

L16. If someone wants to learn something, visual impairment is not an obstacle. Most important is interest - even good vision doesn't help if there is no interest

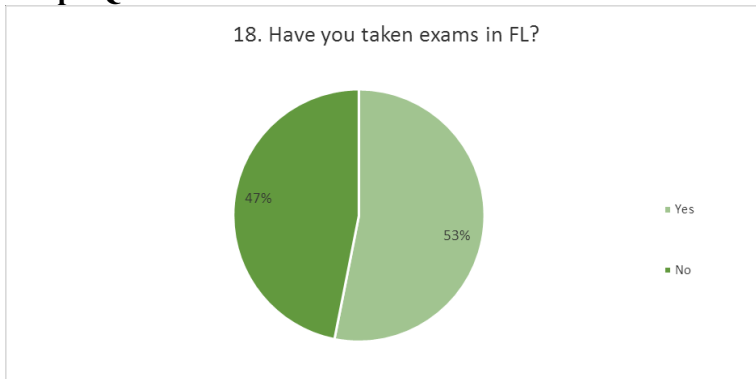
Graph Q3.**Graph Q4.****Graph Q5.**

Graph Q6.**Grapha Q8.****Graph Q9.**

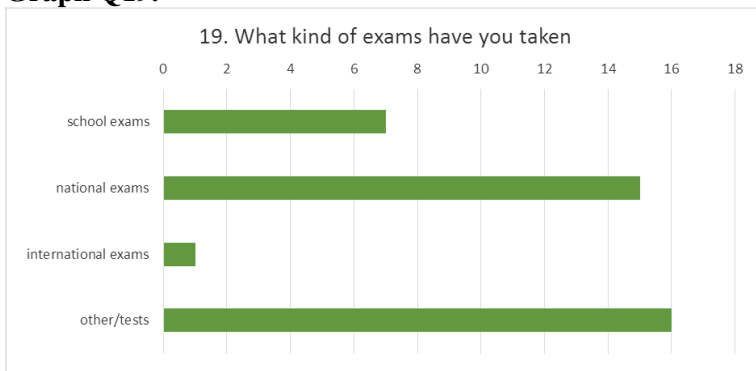
Graph Q10.**Graph Q11.****Graph Q12.**

Graph Q13.**Graph Q14.****Graph Q16.**

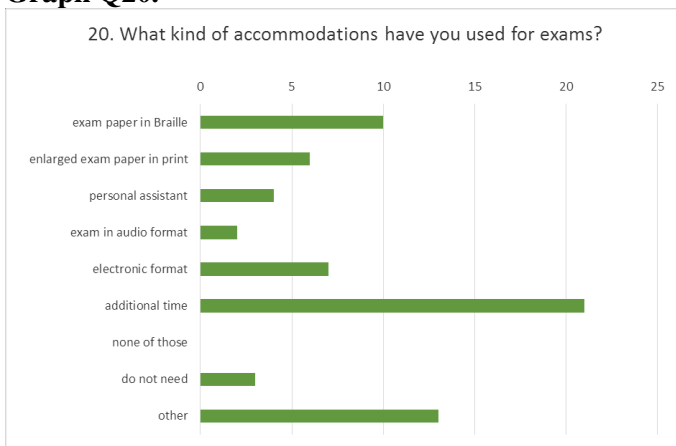
Graph Q18.



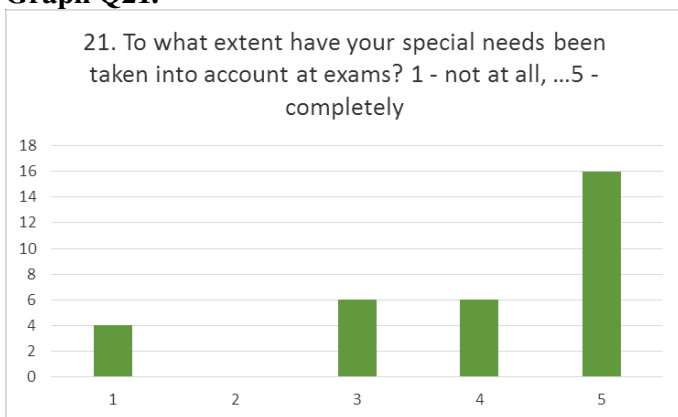
Graph Q19.



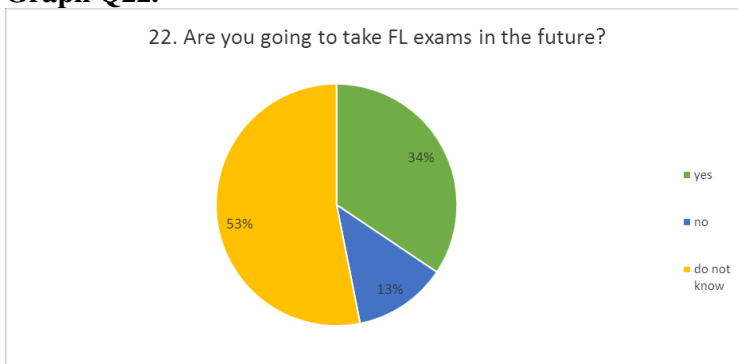
Graph Q20.



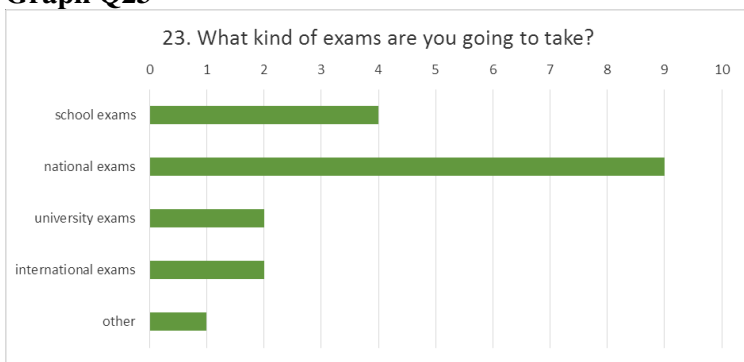
Graph Q21.

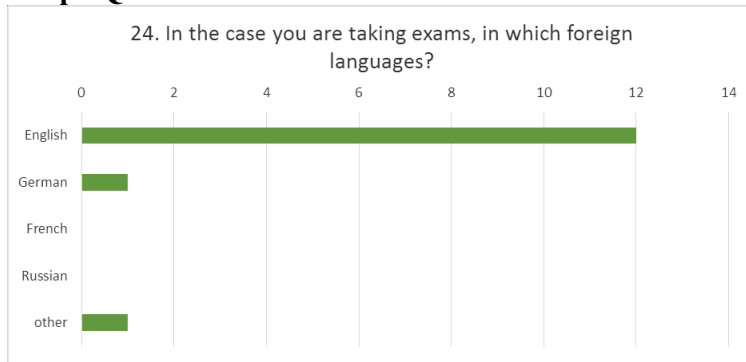
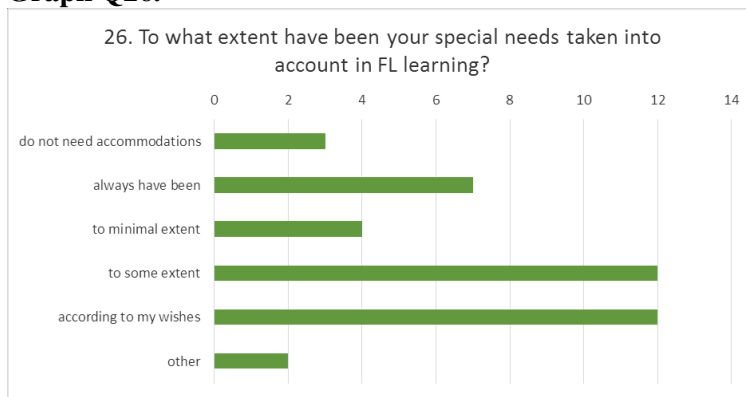


Graph Q22.



Graph Q23



Graph Q24.**Graph Q26.**

RESÜMEE

Monica Lõvi

Aspects of Teaching/Learning English as a Foreign Language in the Case of Blind/Visually Impaired Learners in Estonia

Inglise keele kui võõrkeele õppimise/õpetamise aspektidest nägemispuudega õppijate puhul Eestis

Magistritöö

2013

Lehekülgede arv 99

Eestis on järjest enam hakatud ellu viima euroopalikku kaasavat hariduspoliitikat, mille järgi erivajadustega õpilased saavad õppida oma kodukohajärgses tavakoolis. Seetõttu vajavad ka tavakoolide õpetajad teadmisi õpilaste erivajadustest. Nägemispuue on küll madala esinemissagedusega, kuid samas on just selle puude puhul tarvis arvestada väga spetsiifiliste õppimist ja õpetamist mõjutavate teguritega.

Käesoleva magistritöö eesmärgiks on kirjeldada pimedate ja vaegnägevate õpilaste inglise keele kui võõrkeele õppimist ja õpetamist mõjutavaid tegureid. Põhitähelepanu pööratakse info kättesaadavusele ja õppematerjalide kohandamisele ning õpetamise meetodilistele aspektidele. Eraldi käsitletakse võõrkeele eksamite kohandamise teemat, mis on aktualiseerunud, sest alates 2014. aastast on Eestis üks kohustuslikest riigieksamitest võõrkeele eksam.

Töö esimeses osas antakse teemakohane teoreetiline ülevaade, milles tuuakse esile eelkõige lugemise eripära nägemispuude puhul ning taktiilse ja auditiivse informatsiooni nn lineaarse vastuvõtuga seotud tegurid. Tähelepanu pälvivad visuaalse info puudumisest tulenevad asjaolud ning muuhulgas selle osa implitsiidses võõrkeele omandamise protsessis.

Magistritöö teises osa esitatakse märts – mai 2013. a. Eestis läbiviidud empiirilise uurimuse tulemused ülalmainitud teemadel. Nägemispuudega õppijate võõrkeele, eelkõige inglise keele õppimise/õpetamisega ja vajalike kohandustega seotud aspektide määratlemiseks viidi läbi kaks küsitlust: üks nägemispuudega õpilasi õpetavate võõrkeeleõpetajate (n=12) ja teine nägemispuudega võõrkeeleõppijate (n=32) hulgas. Lisaks toimus fookusgrupi intervjuu kahe spetsialistiga riigieksameid korraldavast asutusest. Töös esitatakse respondentide vastuste põhjal saadud tulemused kasutatavate ja eelistatavate kohanduste ning õppeprotsessis rakendatavate meetodite kohta. Uuringus saadud andmete kokkuvõtteid mõlema sihtrühma kohta on lisades 3 ja 4; vastavad küsimustikud on lisades 1 ja 2.

Tulemustest võib enam huvipakkuvateks pidada aspekte, mille järgi nii pimedatele kui ka vaegnägevatele õpilastele õppematerjalide kohandamisel peaks järgima samu lineaarsel viisil teksti vastuvõttust tulenevaid asjaolusid. Samuti on oluline arvestada auditiivselt esitatava info helilisi omadusi. Kuigi respondendid rõhutasid nägemise puudumisest tingitud erinevusi võõrkeele õppimisel, leiti, et sobivate, eelkõige IKT-põhiste kohanduste kasutamise korral pole need määravad; ka kasutatavate meetodite/tehnikate osas oli kokkulangevusi tavaõppes kasutatavatega. Töö lõpuosas on toodud mõningad soovitusel võõrkeele õpetamiseks pimedatele ja vaegnägijatele.

Kokkuvõtteks võib märkida, et kuigi käesoleva magistritöö empiiriline uurimus põhineb suhteliselt väikestele valimitele, annab see ülevaate nägemispuudega õppijate

võõrkeele õppimisega seotud olulisematest aspektidest ja õppimist/õpetamist toetavatest teguritest.

Märksõnad: hariduslikud erivajadused, nägemispuue, pimedad ja vaegnägevad õpilased, kohandused, kohandatud õppematerjalid, punktkiri, võõrkeele õppimine.

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THE CASE OF BLIND/VISUALLY IMPAIRED LEARNERS IN ESTONIA,**
(*lõputöö pealkiri*)

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