

ABOUT MEETING THE OBJECTIVES OF THE CURRICULUM BY BOYS AND GIRLS LEARNING IN ANOTHER LANGUAGE

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Abstract:

In multicultural societies, different language learning possibilities are paid much attention to. In Estonian schools, language immersion programmes have been successfully implemented. In Estonia, the implementation of the early language immersion programme started in 2000. At the same time, the problem of meeting the objectives of boys and girls has been raised. The objective of the present study is to find out – based on teachers' assessments – the results in meeting the objectives of the curriculum at the end of the first stage at school by the boys and girls having participated in the early language immersion programme. The method of this study was a questionnaire; there were 180 statements in the questionnaire. The study was carried out in years 2008 – 2010. The results of the study revealed that the meeting of the objectives of the curriculum of the boys' and girls having passed the early language immersion programme was very good according to their teachers' assessments. Generally, the language immersion programme supports the preparation of children for school and their progress at school. Boys and girls learn generally purposefully, if their gender is considered.

Key Words: Boys and girls; language immersion programme, curriculum, primary school, objectives

Introduction:

Several changes in the society have taken place since Estonia regained its independence. The constitutional right of self-development and learning is important for every child; it should be based on their needs and should enable them to develop their various capabilities to manage in life (EURYDICE, 2009; NARST Handbook, 2012; OECD, 2012). Since Estonia regained its independence and joined the EU, more and more often the peculiarities of a multicultural society have been talked about and discussed here. Therefore, the need to pay more attention to getting to know the educational needs of non-Estonians is yearly increasing. That has made citizens discuss about bilingualism as a phenomenon of life (Käosaar, 2011; Kikas, Toomela, 2012; Kukk, et.al., 2012). Several international documents of education policies emphasise that during the child's learning period, much attention has to be paid to the child's all-round social, emotional, physical and cognitive development (EUROCHILD, 2010; OECD, 2006); at that, it has been separately emphasised that multicultural learning environment has to be evaluated (EURYDICE, 2009; OECD, 2012). It is essential that in their educational development learners feel dignified among others. Their formation process into citizens is assessed by meeting the objectives of the curriculum as one of many factors. The meeting of the objectives of the curriculum has to enable the learner to make sufficient efforts and achieve readiness for learning securing their managing as people (Pramling Samuelsson, Carlsson, 2008; Yazici et al, 2010).

The objective of the authors of the present article is to find out – based on teachers' assessments – the meeting of the objectives of the curriculum by the boys and girls having participated in the early language immersion programme at the end of the first stage at school (third year at school, form 3). The method of this study was a questionnaire.

How Estonian boys and girls have met the objectives of the curriculum

Bilingual education in Estonia. Since the Republic of Estonia regained its independence in 1991, the Estonian education has made for the aim that non-Estonians have to acquire functional bilingualism by the end of their leaving basic school and thus become competitive on labour and education markets of Estonia (*Language Immersion Centre, 2007*). The nature of bilingual education is seen as a development through many internal and external changes to be accomplished through linguistic opportunities. Bilingual education is influenced by educational (e.g. thinking advantages), social (e.g. literacy in two languages), economic (e.g. wider choice on labour market), cultural (e.g. more experience) and political factors (e.g. tolerance), which have their own impact fields and consequences (Baker, 2007; Levinson, 2007; Olssen, Codd, O'Neill, 2004). Discussions on bilingual education have been focused on the development of the first language, the development of the second language and progress in all the subjects (Brisk, Harrington, 2007; Levinson, 2007).

Implementation of language immersion programme in Estonia. In Estonia, the early language immersion programme is considered one of the most efficient possibilities (Käosaar, 2011), and has been implemented in basic schools of Estonia since year 2000; it has also been more consciously studied (Kukk, et al., 2012; Mehisto, Asser, 2005; Mehisto, 2012). The language immersion programme is an enriching way of learning, where learning is offered in a language which is not the learner's mother tongue (*Phare programme – European Union*). The objective of the programme is to support the integration of children of other nationalities in the Estonian society and provide them with equally good skills both in their mother tongue and in other languages (Dalton-Puffer, 2011; Genesee, Paradis, Crago, 2004). The readiness for the participation in the learning process is formed step by step.

In the present case, the socio-constructivist approach the ideological principles of which estonian national curriculums – the *national curriculum of basic schools and grammar schools (2002)* among others – proceed from has been taken as the theoretical basis. The activeness of the learner in the learning process and the acquisition of knowledge in relations with the surrounding environment are emphasised (bredekamp, copple, 1997; dewey, 1963; doddington, hilton, 2007; winch, gingell, 2008). The national curriculum of basic schools and grammar schools (2002) is a core-curriculum by character, where the emphasis is on the transdisciplinary approach and focus is on learners' interests and solving problems (krull, mikser, 2010). The curriculum (2002) sets concrete objectives for the mental, social and physical development of children during learning process, and for teaching them to achieve learning results. In the general objectives, achieving the skills related to the general managing of the person has been enacted. During the last decades, gender studies have been more and more focused on (marling, 2011); the attention has been paid to the fact that the process of teaching boys and girls requires more differentiation in the emphasis on activities and the conveyance of information (gurian, ballew, 2004; potowski, 2002).

Boys and girls as learners. Boys' and girls' special educational needs proceed from their biological differences. First of all, the composition and functioning of their brains are different (e.g. the right and left hemispheres of girls' brain are in better interconnection than these of boys' brain, in the result of which girls use resources faster, more frequently and in more fields of their brains) (Gurian, Ballew, 2004; Biddulph, 2008, 60; Blakemore, Frith 2005). Boys' thinking is mostly deductive and girls' thinking is inductive (Gurian, Ballew 2004). Proceeding from that, in meeting the objectives of the curriculum at the first stage of school it is essential to take into consideration that boys' fine motor skills and coordination abilities are still at the developing stage while girls, in general, already use these skills. The different speed of the development of brains has caused boys' more frequent learning difficulties, the fall in learning motivation and interest (Biddulph, 2008). According to the studies (Blakemore, Frith, 2005; Seebauer, 2008; Watson, et al. 2010) it has become clear that boys' need for physical activity is significantly bigger than that of girls. It has also been observed that for boys the motivator of solving problems is an inspiring challenge, for girls it is a wish not to disappoint others (parents, teachers, friends) (Seebauer, 2008; Watson, et al., 2010). In addition to the above-mentioned development peculiarities, meeting the objectives of the curriculum, teachers have to consider the fact that learners' abilities are different, the social and cultural background of every learner is different, and their development does not proceed evenly (Biddulph, 2008; Connolly, 2004; Eschenbeck, Kohlmann, Lohaus, 2007; Holz, 2008; Watson, et al., 2010). In order to efficiently

meet the objectives of the curriculum, it is important to consider gender roles formed / being formed in the context of boys' and girls' socio-cultural background (Alloway, et al. 2002; Biddulph, 2008; Connolly, 2004; Gurian, Ballew 2004; Genesee, 1996; Potowski, 2002; Talib, et al., 2009) – that influences everyday academic managing as well. Boys' and girls' learning is more successful, if it takes place in social situations, and the learner connects new contents with their earlier knowledge and experience (Kikas, Toomela 2012; Shelton, 2008; Tynjälä, Heikkinen, Huttunen., 2005). The reality of the surrounding environment is essential, as it forms the perception of the development process of the personality (e.g. at school, at home, in class, etc.) in the particular society and culture (Engeström, 2004; Tynjälä, Heikkinen & Huttunen, 2005). Thus the actuality the present theme comes from the need to learn how the boys and girls having started learning by the Russian language immersion programme have met the objectives set in the curriculum by the end of the third year at school. The comparative assessment of the development results of boys and girls proceeding from the objectives of the curriculum enables to receive feedback about their school performance by the end of the first stage at school. The main problem of the study is as follows: *How well have the boys and girls having participated in the early language immersion programme met the objectives of the curriculum by the end of the first stage at school based on their teachers' assessments?*

Method and sample. The study has been composed as a survey; it is quantitative and descriptive by study type (Creswell, 2005, 353-354). The study is longitudinal, and the data presented in the article have been collected during three years of study (2008–2010). The method of collecting data was the structured questionnaire, which consisted of a series of statements divided into theme blocks for the assessment of the meeting of the objectives of the curriculum.

In the framework of the study project, data were collected from the same individuals in different times to get data for analysing the meeting of the objectives of the curriculum. The study consisted of three stages: the first in 2008, first year at school (form 1); the second in 2009, second year at school (form 2); and the third in 2010, (n=52), third year at school (form 3).

In order to increase the reliability of the results the persons under study were chosen from different counties, and the time of collecting data was at the end of the learning period (in spring). 34 class teachers assessed pupils' (2010, N=52) meeting the objectives of the curriculum at the first stage at basic school. In the representative sample there were more capable and less capable children by their learning abilities.

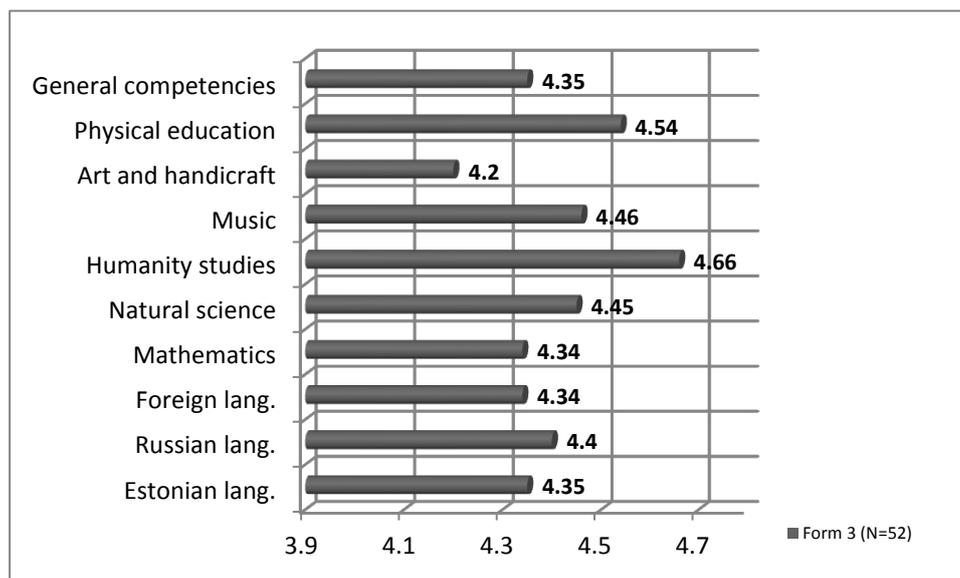
Statements in the questionnaire describe the objectives of the curriculum and have been divided into theme fields; this enables to compare the results from the point of view of the curriculum as a whole. The assessment of the data took place on the Likert-type 5-point scale (1=poor; 3=medium; 5=excellent). The reliability of the variables belonging to different fields of the questionnaire has been assessed by Cronbach alfa. The questionnaire for primary school teachers consisted of the following areas: 1) general educational objective (n=30, $\alpha = .975$), 2) Estonian and Russian language (n=30, $\alpha = .979$), 3) mathematics (n=22, $\alpha = .978$), 4) natural history (n=18, $\alpha = .954$), 5) human study (n=16, $\alpha = .944$), 6) music (n=17, $\alpha = .986$), 7) art and handicraft (n=29, $\alpha = .955$), 8) physical education (n=20, $\alpha = .969$) 9) foreign language (n=17, $\alpha = .927$).

In the analysis of the results, characteristics of descriptive statistics were firstly used. The connections between the learning fields were studied by Pearson's correlation analysis, statistically relevant differences in averages were checked by Student's t-test. $\alpha = 0.05$ as the relevant level has been used in interpreting the test results (Creswell, 2005).

The meeting of the objectives of the curriculum by boys and girls at the end of the first stage at school (based on the assessments of their teachers)

During the last years, the feminised school has arisen on the agenda where girls and boys have appeared to find themselves in a learning environment which is unequal for them (Ballew, Gurian, 2004; Connolly, 2004; Eschenbeck, Kohlmann, Lohaus, 2007; Holz, 2008). Hence the reason for the observation if there are differences between boys and girls in managing with school activities in order to meet the objectives of the curriculum. In the national curriculums, which have once been and are still in force in Estonia, the emphasis is on focusing on pupils' interests and solving problems (Kikas, Toomela, 2012; Kukk, 2012). Although the curriculum is subject-based, its objective is to integrate the knowledge offered in the subject matters of different fields, getting to know social problems, which are related to the pupil and society. The objectives of the curriculum have been divided into

subject fields to be assessed, which proceed from the subject matter of the national curriculum. First, the drawing below presents a summary of teachers' assessments on the meeting of the objectives of the curriculum by the pupils of the third year at school (form 3) in different fields.



$$\alpha = .980; p < .005$$

Drawing 1. Teachers' assessments on meeting the objectives of the curriculum in different fields by the pupils of form 3.

Drawing 1 shows that from the point of view of meeting the objectives of the curriculum, boys' and girls' learning results – based on their teachers' assessments – turn out to be generally very good. At the end of the first stage of school, the best marks have been provided by teachers to pupils' achievements in meeting the objectives of the curriculum in the field of humanity studies of all the fields under study (form 3 (n=52): $x=4,66$). By that, pupils have positive self-approach and good relations with classmates, they are considerate and fair to others and themselves; they value family, recognise their home place and appreciate good practices of behaviour. Lowest marks in the comparison of learning fields have been provided in the field of art and handicraft ($x=4,2$). This particular field requires good fine motor skills and coordination, and the result confirms researchers' viewpoint that these skills are only in a developing stage at the first stage at school. Thus, the present study result confirms development peculiarities of learners at this age. To sum up, it can be stated that (see Drawing 1) the meeting of the objectives of the curriculum by pupils has proceeded relatively evenly, because there have been no drastic differences in the assessments on different fields of the curriculum. The outcome is quite logical, because it is not likely that learners at the first stage at basic school feel any special aversion or preference towards different learning fields – according to their teachers' opinions/assessments – pupils manage equally well with all of the subjects.

As the present article focuses on the meeting of the objectives of the curriculum by boys and girls, then boys' and girls' performance in different fields of the curriculum is under closer inspection.

Table 1. The differences in boys' and girls' achievements – based on their teachers' assessments – appear at the end of the first stage at school.

Form 3	Learning field	Pupils gender	N	Mean	Std. Deviation	t	Sig. p
Teacher	Physical education	girl	26	4,66	,388	1,520	,135
		boy	26	4,42	,711		
	Art and handicraft	girl	26	4,49	,538	2,949	.005
		boy	26	3,97	,732		

Music	girl	25	4,75	,341	3,674	.001
	boy	26	4,17	,712		
Humanity studies	girl	26	4,77	,308	,493	,624
	boy	26	4,68	,892		
Natural science	girl	26	4,60	,355	1,616	,112
	boy	26	4,37	,618		
Mathematics	girl	26	4,44	,612	,877	,385
	boy	26	4,27	,754		
Foreign language	girl	24	4,52	,635	1,829	,074
	boy	25	4,17	,720		
Russian language	girl	26	4,56	,462	1,789	,082
	boy	25	4,23	,806		
Estonian language	girl	25	4,54	,524	1,892	,064
	boy	26	4,18	,797		
Educational objectives	girl	26	4,41	,575	,968	,338
	boy	26	4,20	,938		

According to the part of the table, where teachers' assessments on boys' and girls' managing in different learning fields are reflected, the marks on boys' and girls' performance in learning fields vary very little. Thus, it may be stated that boys' and girls' meeting the objectives of the curriculum – based on teachers' assessments – is generally very good. Still, it is possible to observe that teachers have assessed girls' performance in all the fields a bit higher than that of boys. Although these assessments are not statistically relevant, they are still absolutely evident. Hence the question: do teachers overestimate girls? If so, then why? The present study did not prove it; neither gave it any reasons for such assessments. There is another question: do female teachers categorise girls as „efficient“, and boys as „naughty and aggravating“ since the first years at school already? Relying on the study results that might be assumed, because earlier studies have confirmed that. At the same time, in the present study, teachers' attitudes and ideas about differences in boys' and girls' learning were not investigated; the aim was that teachers assessed the general integral managing with the subject matters of the fields of the curriculum by the particular child.

According to the other part of the Table, where statistically relevant differences in boys' and girls' meeting the objectives of the curriculum (based on teachers' assessments) are shown, it has to be stated that between two fields there is a big difference: music (boys: $x=4,17$; girls: $x=4,75$; $p=.001$) and art & handicraft (boys: $x=3,97$; girls: $x=4,49$; $p=.005$). It may be concluded that teachers consider boys' and girls' meeting the objectives of the curriculum at the first stage at school generally very good, and the results confirm peculiarities related to capabilities of learning.

In the case of a holistic curriculum, there is a connection between the subject matters of learning fields. Therefore, from the point of view of the idea of the study, it is essential to clarify and learn the subject matter of which a learning field supports academic managing in different learning fields, and how strong is the connection between learning fields – that was also analysed in the context of the present study. Pearson's correlation analysis was used to find out and analyse the connections between learning fields.

Analysing the results of the study of boys' finding connections and acquiring the knowledge and skills of different learning fields at the end of the first stage at school, surprising results were obtained. While in case of boys' the connections were strong or very strong, then in case of girls these were strong or weak, and comparing several learning fields, girls did not find any connections at all. Boys found very strong correlative connections (in the field of languages) acquiring the skills of different languages (e.g. between Russian and Estonian, $r=.929$ $p<.01$; between Russian and foreign languages $r=.873$ $p<.01$, etc.), girls found strong connections in the field of languages (e.g. between Russian and Estonian, $r=.895$ $p<.01$; between Russian and foreign languages, $r=.657$ $p<.01$, etc.) That proves that both in case of boys and girls studying in one language, a very positive basis is founded and possibilities for the development of a second language. Studying two (three) other languages, the acquisition of skills in other languages is also supported. Krashen (1982) states that the language

skills which have been acquired unconsciously initiate sayings also in the second language and influence the fluency of the use of the second language. At the same time, the language studied knowingly works in the situations, where the learner has enough time (Kebbinau, Aja, 2011, Krashen, 1982, 15–19.). In case of boys, a strong or very strong connection between the educational aims and subject matters of all the other learning fields appears ($r = .836 - .513$; $p < .01$) and between the subject matters of different learning fields themselves. In case of girls, there is a strong connection between the field of educational aims (similar to the boys) and the results in other learning fields of the curriculum ($r = .732 - .423$; $p < .01$), except physical education. In case of boys, it appears that the connections are weaker – according to teachers' assessments – between interacting learning fields: physical education with natural science ($r = .439$ $p < .01$) and humanity studies ($r = .241$ $p < .01$); humanity studies with art and handicraft ($r = .388$ $p < .01$). In case of girls, an unexpected result is in the field of physical education, which has no connections with any other learning field. It is also amazing that very little connection between the field of music and the field of art and handicraft ($r = .235$ $p < .01$) was revealed, and also foreign languages. To sum up, it has to be stated that in boys' meeting the objectives of the curriculum there are more connections between the different learning fields of the curriculum. That means that in the learning process boys use the knowledge of different learning fields connectedly, girls however, meet the objectives of the curriculum based on different subjects and do not create connections. Low figures for connections in certain learning fields (e.g. physical education in case of girls) refer to the need to concentrate more on the integration between the fields in the learning process and the improvement and application of teaching methods proceeding from the gender aspect.

Conclusion:

Focusing on issues of education, from year to year more attention is paid to the science-based and systematic approach to meeting the objectives of the curriculum. At that, it is essential to concentrate on the valuation of the coherence of the process of education, and the consistent approach to learning and teaching. The documents of the European Union in the field of education, which the documents regulating the organisation of Estonian education are based, emphasise the respect for life-long learning, diverse cultural awareness and human dignity (EURYDICE, 2008/09; Kukk, 2010, OECD, 2006, EUROPEAN... 1996; UNESCO 2000). The vision of the children we want to bring up to become future citizens is a challenge to the Estonian education system. Who is ready for school, how well prepared they are for school activities and how capable they are in them – is revealed by meeting the objectives of the curriculum. Based on the assessments of class teachers, meeting the objectives of the curriculum of boys and girls at the first stage at school can be considered generally very good in all the fields of the curriculum, notwithstanding if the school time started with language immersion, or was also continued by the language immersion.

Analysing the meeting of the objectives of the curriculum by boys and girls, it has to be stated that, according to their teachers' assessments, the meeting of the objectives of the curriculum by the pupils under study is generally on a good level in all the fields of the curriculum. It has become clear from the earlier studies (Blakemore, Frith 2005: 63; Seebauer, 2008: 133–140; Watson et al. 2010) that boys' needs for physical activeness are significantly bigger than these of girls, and their fine motor skills and coordination ability are poorer than that of girls. The fact is also confirmed by the results of the present study: The assessments of the teachers in the field of boys' art and handicraft (where these skills are mostly used) were poorer than these of the girls' teachers in the same field. In the field of physical education, where big emphasis is on physical activeness and application of the ability of correlation, boys were, however, more successful in finding connections between the fields than girls: boys connect the matters studied and transfer the information into other learning fields. The connections found between the fields of the curriculum are thought-provoking: boys learning is characterised by the transfer of the knowledge acquired in one field into another field; at the same time, girls found very few connections. It is very pleasing, however, that the learning results in the field of languages of the boys and girls having participated in the language immersion programme are very good and support achieving good learning results also in other fields of the curriculum. Boys and girls have good learning results in different fields of study. Positive results in meeting the objectives of the curriculum prove generally good cooperation between teachers, and boys and girls. At the age

of primary school, managing with various tasks and works is developed. By the end of the third year at school, general competences have been well acquired. In various learning situations, pupils are very motivated, open and creative; they dare to be frank and are social. There are some difficulties in solving problem situations – it might be due to their age. The above refers to the objectives of Estonian curriculums, which have been set realistically and support the integral development of the child, and also to long-term pedagogical traditions and the vitality of language immersion methods in Estonian schools..

The main conclusion: the pupils having participated in the early language immersion programme can successfully manage with meeting the objectives of the national curriculums: the children having started learning by the language immersion methods are well prepared for school and they can excellently manage at school notwithstanding the learning language.

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