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Educational Innovation in Kazakhstan:
The Case of Bolashak Finland

Essi Ryymin, Ph.D. (Edit.)

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Foreword

I would like to congratulate the team of authors for collaborating on an inspiring and in-depth volume that rightly argues that reforming educational leadership, teachers' education and concrete pedagogical practices in learning environments must be core elements of a successful educational reform.

The authors, upper secondary teachers, researchers and educational developers from Kazakhstan, completed their nine-month internship programme in the School of Professional Teacher Education at Häme University of Applied Sciences (HAMK) in July 2014. The key principle of the educational co-operation and respectful, reciprocal dialogue in the programme was the pedagogical transformation and paradigm shift from the teacher-centered to the learner-centered approach and innovative learning methods.

This collection of articles reveals that as a result of co-operation, the authors have not only adopted, but further developed international good practices and translated them into programmes and actions. The new pedagogical culture and educational models have been disseminated to the educational sector of Kazakhstan with a high degree of commitment.

President of Kazakhstan Nursultan Nazarbayev indicated in the Kazakhstan 2050 Strategy that educational reform is considered to be the most important tool for empowering Kazakhstan into the ranks of the top 30 most developed countries by 2050. In this context, the continuation of educational collaboration and co-research including all segments of education, lifelong learning, social welfare and sustainability, is an important international undertaking.

The co-operation with authors of the book continues with a sincere willingness to learn, develop and work together for the future generations.

Essi Ryymin

Dr., Principal Lecturer
School of Professional Teacher Education
Häme University of Applied Sciences

Intergrated Learning at Valkeakoski Campus

Bolashak interns welcomed by the Kazakhstan Embassy to Finland.

INDIVIDUALITY, COMMUNITY AND TRUST – the Bolashak teachers' experience of, and thoughts about the Finnish education system

Riitta Metsänen, Principal Lecturer
Vesa Parkkonen, Senior Lecturer

The work of a teacher as well as education systems are always linked to society and culture. It is clear that the Finnish education system is different to that of Kazakhstan because our societies and cultures are different from one another.

We must also not forget history when talking about education systems and learning. While the Finnish education system is seen as one of the best in the world, it should not be forgotten that this level of quality was not achieved in a year or even in a decade. People say that the future has a long past and that is also the case with our education system. One of the directors of the development work, Riitta Metsänen, started at school in 1956. At that time our education system was very teacher-centred and authoritarian, classes were large and the main job of the teacher was to keep order. The teacher was a frightening authority figure. Over the years, the Finnish education system has changed to become more democratic. Everyone now has the same opportunities for continuing their education and there is an emphasis on student-centred learning. You do not need to be afraid of the teacher anymore either.

The Bolashak teachers had an extensive introduction to the Finnish education system, its management, and how it was implemented in practice in different educational institutions. They had the opportunity to shadow teachers and also to teach themselves when the constraints of language made it possible. The Bolashak teachers were surprised at Finnish education policy choices and at equal educational opportunities for all. Inclusive teaching of special groups, such as those with disabilities, also seemed to be a new area for them.

In the discussions on the management process of development work in this publication, the teachers in the Bolashak group considered why the Finnish education system had been so successful. In their development work they raised the particular issue of the teacher-student relationship and how different these relationships were in different countries and cultures. The subject chosen for development work also focussed on teaching methods, authenticity of learning, integrative pedagogy, autonomy, dialogue and teaching planning. Online learning and digitisation of teaching aroused a

lot of interest and attention among the teachers, and this is also a focus of development in many Finnish educational institutions.

The Kazakhstani teachers were also very interested by how much both teachers and students did together and how important learning from each other was in the learning process. One of the main things the teachers in the Bolashak group raised was the feeling of trust and equality in Finnish education culture as well as the fact that there was equality of educational opportunity for all.

The Bolashak teachers were extremely committed and ready to develop their professional skills and to produce new knowledge. In their home country they had already acquired robust and well-rounded subject expertise; their academic skills were top class. They also greatly appreciated their own work as teachers to which they were morally and ethically highly committed. That is why we also have a lot to learn from the Kazakhstani teachers. The fact that they came to study in a foreign country for almost a year, in a foreign culture and language is already something that deserves a lot of respect and appreciation. They were also ready to use different and new teaching methods. They also had the courage to be critical and to assess whether the different methods could be applied and transferred into their work as teachers.

Every society has developed its educational system to meet its needs. The importance of the work of teachers is linked to the development of society and culture; through their students, teachers have a direct impact on the whole of society. We are bringing up a new generation and that is why our work is extremely important. The interest of the Kazakhstani teachers in their work as educators is different from that of Finnish teachers. Many teachers here have forgotten that they are also educators. Teachers here regard their work more as being subject experts than educators. Here too there are things we can learn from the teachers in the Bolalshak group.

It was a pleasure to guide the teachers from the Bolashak group in their development work. Their enthusiasm and interest was infectious. Many issues and questions were raised in the steering sessions, the sorts of things that we would not think of because we consider some issues to be self-evident.

To finish with, Samuel Beckett's poem which can also be interpreted as a hymn of praise for learning:

"Ever tried.
Ever failed.
No matter.
Try Again.
Fail again.
Fail better."

(http://www.samuel-beckett.net/w_ho.htm)

KEY POINTS OF FINNISH EDUCATIONAL SYSTEM LEADING TO SUCCESS: LOCAL SCHOOLS PERSPECTIVE

Duman Sapakov, Zhanar Zhaxybayeva, Brian Joyce, Maaret Viskari

Contributions by authors: Duman Sapakov and Zhanar Zhaxybayeva have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

Veni vidi vici. Why would Kazakh teachers travel to Finland for 9 months? The answer was to seek evidence and a truth that had meaning within their culture.

In the case of Duman and Zhanar it was important to carry out field research in the Finnish education system at all levels to prove or disprove what they had read from afar.

The programme by PTEU HAMK as commissioned by Bolashak was a buffet of opportunities that offered theories from our experts, field experience from observations, investigative interviews with principals and administrators, peer to peers discussions with teachers and workshops that allowed them to process and disseminate their findings.

Duman and Zhanar find that the most important features of the Finnish education system are equality, flexibility, professional autonomy, trust, professional responsibility, intelligent accountability and highly educated teachers.

In the contract the School of Professional Teacher Education at Häme University of Applied Sciences, promised them observations and real teaching situations and it was only through these that evidence provided conclusions to their initial perceptions. What struck us as powerful findings was the 'cycle of trust' witnessed and formulated in their report. This trust started at government level and moved throughout the system to municipality, school, principal, administration, teacher and parents. This trust, they discovered, put the student firmly in the centre. Our feeling is that their findings showed that the student is not just the centre of the teachers' methods and approaches but the centre of the whole cycle of trust.

In Ms Yessengaliyeva's article "Rediscovering the role of the teacher" she ponders hard about what she was before coming to Finland and what she her responsibilities would be moving forward. The simple but powerful truth was stated at the end "What my students need" rather than *"What do you need from me" and to build the learning process interests of students.*

Abstract

During the last decade Finland has shown magnificent results in the educational field (in the "top ten" in 2000, 2003, 2006, 2009). What helps Finnish students to show such magnificent results? What is the secret of Finnish education? Why did their excellence not appear before? Leading with these questions we tried to find answers at first in books, articles and then in schools. We have used a lot of materials among which the most valuable printed resources were Pasi Sahlberg's book "The Finnish lessons", National core curriculum for basic education of year 2004, Antti Saari, et.al. international Handbook of Curriculum Research under the title "Governing Autonomy. Subjectivity, Freedom and Knowledge in Finnish curriculum discourse". Also a combination of research methods were used while the research: theoretical analysis, questionnaire, observation, interviewing, statistical analysis. The results of these methods are reflected in practical part of our project. With the help of this project work we would like to provide a realistic picture of Finnish education, implementation and functionality of key points of Finnish success at schools.

The sites of the research are primary, secondary and upper-secondary schools of Hämeenlinna, Finland. The target area of the work is distinctive features of Finnish educational system in local school perspective. The objective of the research is to investigate functionality of distinctive features of Finnish schools.

At the beginning we identified the most important features of Finnish educational system. In our opinion they were equality, flexibility, professional autonomy, trust, professional responsibility, intelligent accountability and highly educated teachers. These characteristics of the system were defined, explained and exemplified in theoretical part. As far as theory only lets you know some written facts and events we were not satisfied with it and also desired to choose an empiric way. Questionnaire, observations and interviews provided us with realistic situations, opinions and attitudes of school staff to key points of Finnish education.

Key words Finnish education, trust, equality, autonomy, responsibility

1. Introduction

During the last decade Finland has shown impressive results in the educational field (in the "top ten" in 2000, 2003, 2006, 2009). The results shown by Finnish students in PISA attract a lot of educators and researchers to discover the main secrets of Finnish educational system (Saari et. al., 2012). What helps the Finnish students produce such results? What is the secret of Finnish education? Why did their excellence not appear before? With these leading questions we tried to find answers firstly in books, articles and then in the field, schools. With the help of this project work we would like to provide a realistic picture of Finnish education, implementation and functionality of key points of Finnish success at schools.

The sites of the research are primary, secondary and upper-secondary schools of Hämeenlinna, Finland.

The target area of the work is distinctive features of Finnish educational system in local school perspective.

The aim of the research is to investigate functionality of distinctive features of Finnish schools.

The research tasks are to:
- identify the meaning of significant qualities of Finnish educational system
- conduct interviews and questionnaires at Hämeenlinna schools
- analyze and interpret the results of interviews and questionnaires
- summarize the research results.

A combination of research methods was used while the research: theoretical analysis, questionnaire, observation, interviewing, and statistical analysis.

Practical significance of the research is the possibility to assume the adaptation of some distinguishing features of Finnish educational system thoroughly described in this work into those of Kazakhstan.

2. Finnish education and its distinctive features

According to Pasi Salberg (Hargreaves et. al., 2010) "there is a lot of speculation regarding the reasons that could explain Finnish educational success in international comparisons". He asserts that most of attempts to explain good educational performance frequently concentrate on things that are in the education system, like educated teachers or intelligent responsibility policies. Further he discusses that argues concerning cultural features of Finland and their role in high educational performances is actual.

2.1 Equality and flexibility

The first significant and valuable feature of Finnish education is equality and flexibility. Education in the comprehensive school system is compulsory, equal and free for every student. The word "every" means really everyone regardless of social status, gender, religion and health.

An important part of the Finnish comprehensive school pays great attention to special educational needs students. "The aim of special education is to help and support students by giving them equal opportunities to complete school in accordance with their abilities and alongside with peers" says Pasi Sahlberg in his book "Finnish lessons". There are two educational ways for such students: the first is studying in a regular class and attend part-time special education in small groups; the second is study in a special group in the common comprehensive school or in a separate institution. (Sahlberg, P. 2011, p. 47) In Finland almost all the special needs students study at general comprehensive schools and only 4% of them attend separate schools. The tendency of mixed learning is possible because special needs students at schools are provided by teachers with special education, assistant teachers, health care support and welfare equipment (Sarjala, J., 2013).

Equality also concerns immigrant students who study at the same common schools and classes with Finnish students. The phrase "equal schools" refers to equity of schools all over Finland in spite of their location. It does not matter whether a school is situated in a big city, town, village, city centre or in suburbs. Schools are equally financed, equipped with furniture, technical devices, learning materials, learning staff, etc. Students enjoy the same school conditions such as safety, comfort, healthy lunch, etc. School teachers are supposed to be high professionals eager to educate the younger generation in every corner of Finland.

Before, as Sarjala, J. says, comprehensive schools worked with a detailed national curriculum, which showed its disadvantages as far as schools had to teach heterogeneous students with different needs and abilities. These facts required flexibility and expertise in school education. In the 1980s,

Bolashak interns are introduced to the comprehensive school system and the national curriculum.

teachers were trained in a strict and precise way; however later in 1990s some fundamental changes were introduced into teacher training philosophy and practice as well. The national core curriculum was altered to be more flexible, more general and practical to give an opportunity for towns and schools to change it according to their students' needs, local peculiarities, courses, etc.

Equality of rights and flexibility of studies can be noticed in upper-secondary school level. There are approximately 150 courses which are chosen by students to have at different years of their school study. There are 75 compulsory courses for everyone defined by the curriculum. However, students are given the freedom to take these courses at their own pace. Three years are given in the curriculum to finish the school but some students can manage it in 2 years, whereas others do it in 4 years depending on their abilities, or other personal cases. (Sarjala, J., 2013). As Sarjala says: "Students do differ – some are faster than others, some have more responsibilities outside of school than others – but all can succeed if the educational system is designed to provide real opportunities".

Another example combining the features of equality and flexibility is an opportunity to study at vocational and upper-secondary schools simultaneously. (Sarjala, J., 2013) If a student is motivated, ambitious and wants to save time, he/she is given the right to be educated in two schools. More-

over an educational system is flexible and offers as much time to complete schools as the student needs. No doubt, studying at two educational institutions is as twice difficult for a student, but not impossible.

In this section we are going to show you some different cases of flexibility in Finnish educational institutions. Let us start with the fact that the curriculum gives some freedoms to the teaching staff to use other ways within their courses e.g. subject assessment for immigrant students with linguistic difficulties, students with diagnosed impairments and comparable difficulties, such as dyslexia. These students are given the opportunity to use special arrangements and show their competences in a way other than in writing, i.e. in a way they can. (National core curriculum for upper secondary schools, 2003) There is no limit for course completion. If a student fails a course exam, he/she can take this course and examination again. Moreover if he/she wants to improve the passed grade, he/she can retake the course and exam. The better grade will be accepted. (National core curriculum for upper secondary schools, 2003) A student can make up an individual educational plan (IEP) for one or more subjects at comprehensive school. Then when a student has to take a final examination at the ninth grade he/she will be provided with examination and criteria appropriate to his/her own IEP objectives. (National core curriculum for basic education, 2004, p. 264).

According to Sahlberg high equity education is not a result of educational factors alone. An important role in equal conditions of starting and getting education is played by the basic structures of the Finnish welfare state. To these equal conditions the author refers early childhood care, voluntary preschool, health service and preventive measures to identify possible learning and development difficulties before children start schooling or during the primary school education. As research shows, the number of students in special education is higher in primary school than in most other countries. However, at the end of primary school this number goes down and again slightly rises when students go to lower-secondary school. After some years this number decreases again. (Sahlberg, 2013, p. 48) It means that in Finland they try to identify and support students with special needs and repair problems as early as it is possible to decrease their number at higher-secondary school. It is better than finding it out in higher comprehensive school when it is more difficult to repair problems as it is practiced in many other countries.

The Finnish welfare state also takes care of students' free lunch all over the country. Students of any kind of school regardless of their home socioeconomic situation get free healthy lunch (Sahlberg, 2013, p. 48). It shows the governments care for students' health and equity. Students come to school to study, to communicate without any interruption of thoughts about meal, money to buy lunch, going home for lunch, or leaving it at home. Their meal is equal, no one suffers from starvation or humiliation.

Equitable learning, conditions and flexibility of education found their evidence from the OECD's first PISA survey in 2000. The results of the competition showed the smallest performance variations between schools in reading, mathematics and science scales of all OECD nations. (Sahlberg, P. 2011, p. 45) The same tendency could be observed in PISA 2003, 2006 and 2009(OECD, 2004, 2007, 2010). Finnish students have slight performance differences in these competition results compared to other countries' students. As it is known, the age of students taking part in testing all over the world is 15 years. But variances are great. Let us take PISA 2009 results to analyze the differences in student reading comprehension. The results variance between schools in Finland is 7% whereas in other OECD countries this number is 42% on average. Seven percent is a small number which proves the social equality of Finnish education, i.e. schools regardless of their situation, area, number of people, etc. are treated equally and enjoy equal opportunities. However, the variation of results within schools is almost the same as in other countries of OECD. This difference shows variation in students' natural talent. (Sahlberg, P. 2011). Accordingly, Finland has equal education proved by the results of some PISA tests which served as an external assessment tool of students' achievements in different fields of study.

2.2 Professional autonomy

Thanks to decentralization Finnish schools have autonomy and large powers to decide different questions that are connected to personal management, instruction and using resources. Finnish teachers also have a certain amount of autonomy in organizing their work (Soguel & Jaccard, 2007; Lingard, 2013).

The administration of Finnish comprehensive schools developed from strong control to certain school's autonomy. The path to the autonomy was through gradually increasing powers of schools in questions particularly concerning curriculum and its development. It means that the Ministry of Education have delegated part of its responsibility to municipalities and those in turn to schools so they can make their own curricula within the framework of National core curriculum. At the beginning, this process was attended by involving different mechanisms of inspection by what implementation of curriculum was controlled. However, in the 1990s all kinds of inspections were eliminated. The Finnish education system has refused national tests aimed at comparing schools or controlling their educational activities. The changes have carried out at the end of the 20th century which can be described as "transition from culture of control to culture of trust" (Miettinen, 2013).

Planning ideas on how to implement teacher's autonomy in their learning environments.

According to Hargreaves and Shirley (Hargreaves & Shirley, 2009) "in Finland, the state steers but does not prescribe in detail the national curriculum". The curriculum at municipality and school levels is written by trusted and highly qualified teachers.

Antti Saari et. al. (Saari et. al., 2012) write that the "teacher's autonomy and egalitarian governance represented as the "Finnish miracle of PISA". They suppose that teacher's autonomy, decentralization and less standardized curriculum could be the reasons of educational success.

The professional autonomy of Finnish teachers is quite high and it has been defined as a crucial element of professional practice. Teachers decide by themselves what to do and how to do in terms of their knowledge and experience. In many countries in contrast to Finland teachers are under considerable control (Mattsson et. al., 2012).

We would like to define the term "teacher autonomy" because it seems to be uncomplicated and fairly understandable for the first time but it is not so. Over the last thirty years a lot of conferences, seminars and researches were devoted to this phenomenon and different authors gave various definitions and clarifications which considered this term from different "angles".

Let us consider some definitions showing these "angles". Benson defines teacher autonomy as "a right to freedom from control (or an ability to ex-

ercise this right) as well as actual freedom from control" (Benson, 2000). While Little states it as a right for selfdirected teaching, i.e. action: Teachers may be "autonomous in the sense of having a strong sense of personal responsibility for their teaching, exercising via continuous reflection and analysis… affective and cognitive control of the teaching process' (Little, 1995). However, Tort-Moloney claims that teacher autonomy is a right to professional self-development: The autonomous teacher is "one who is aware of why, when, where and how pedagogical skills can be acquired in the self-conscious awareness of teaching practice itself' (Tort-Moloney, 1997).

No doubt all of these definitions are right, but they are narrow, one-sided. The researcher who managed to explain the term of "teacher autonomy" from multiple "angles" and combine teacher's rights is McGrath. The dimensions identified by McGrath are the following:

(1) Teacher autonomy as self-directed action or development.
(2) Teacher autonomy as freedom from control by others.

Indeed, professional development could be considered as one form of professional action, but action and development are not necessarily the same thing (we may act e.g. teach, in a self-directed manner, but do not necessarily learn from the experience). Also allowance needs to be made for a distinction between capacity for and/or willingness to engage in self-direction and actual self-directed behavior.

So, synthesizing all the above given definitions of "teacher autonomy" we offer Smith's (2001) set of six characteristics of teacher autonomy:

A. Self-directed professional action
B. Capacity for self-directed professional action
C. Freedom from control over professional action
D. Self-directed professional development
E. Capacity for self-directed professional development
F. Freedom from control over professional development.

2.3 Trust, professional responsibility and intelligent accountability

Finnish educational system and society can be characterized as a culture that is based on trust and responsibility. However trust "is not blind and indifferent" because it has consciously made structure (White & Cooper, 2011). Schleicher Andreas (Schleicher, 2011) writes that trust is a complicated phenomenon because "trust cannot be legislated". Trust in Finnish society has a fundamental importance; however attempts to transfer it to other countries could be inconvenient if it is going to be used for deep reforms. In Finland trust is closely related to taking responsibility for edu-

cational outcomes. Right up to the early 1990s Finnish education system characterized by high centralization and schools in general and particularly teacher's work mainly regulated by central agencies. Since this time "trust-based school culture" started to work. "Finland works with intelligent accountability and trust-based professionalism" (Lingard, 2013).

Finland enjoys the culture of trust in education. This statement is perfectly described in Pasi Sahlberg's book as "the culture of trust meant that education authorities and political leaders believe that teachers, together with principals, parents, and their communities, know how to provide the best possible education for their children and youth" (Sahlberg, 2011, p. 130). According to Tschannen-Moran (2007, p99 cited in Volante, 2012) trust should be demonstrated at all levels of educational leadership by "benevolence, honesty, reliability and competence".

Indeed, trust lives and blossoms only in a society that appreciates honesty, self-trust, and trust for people around, professionalism and good policy. Finland people trust public institutions to a high degree. Trust in schools and teachers are a result of well-functioning civic society and high social capital. (Sahlberg, 2011, p. 131) As Lewis mentions, honesty and trust are supposed to be the most valuable things and the building blocks of the society (Lewis, 2005).

Concerning the concept of responsibility, Pasi Sahlberg (Sahlberg, 2010) asserts that there is a necessity to focus on new types of accountability policies. According to this policy, balance between qualitative and quantitative measures should be found and it could be built on reciprocal accountability, professional responsibility and trust. This policy is frequently called intelligent accountability. Responsibility and accountability are not new concepts for schools because schools and teachers always were accountable for what they do.

In Finland educational accountability keeps and enhances trust among the participants of learning process which comprises students, teachers, parents, school administration, leaders and education authorities. In addition, trust leads them in the process which offers them a strong feeling of professional responsibility and initiative. Parents, students and teachers choose smart accountability system which gives the opportunity to schools to think mainly about learning and let them be freer in planning the curriculum rather than external standardized testing culture which is used a lot in some other countries. (Sahlberg, 2011, p. 130)

In case of test-based accountability teachers have to balance between the purpose of student-centered pedagogy and learning and necessity of showing effectiveness and achievement. It also concerns students who have to balance between "fulfilling their own aspiration with external demands for performance that are often not only conflicting, but also unethical and contradictory" (Sahlberg, 2010).

Pasi Sahlberg (Sahlberg, 2014) sees "placing responsibility and trust before accountability" as one of the components of school improvement. He emphasizes that Finland differs from other countries by lack of inspections, standardized curriculum, and test-based accountability. According to a global accountability movement, making schools and teachers more responsible for their performances is a key factor for high students' achievements. In the process of educational changes Finland has chosen another way by creating intelligent accountability policy. Intelligent accountability keeps trust among all members of educational process and the sense of professional responsibility has had a big influence on teaching and learning (Sahlberg, 2007). O'Neill claims (2002, p58 cited in Klenowski & Wyatt-Smith, 2013) that if "we want greater accountability without damaging professional performance we need intelligent accountability".

David Hopkins (Hopkins, 2012) emphasizes the balance between external accountability and professional accountability within a school where special stress is on formative assessment and self-evaluation. There are two goals concerning accountability: the first is a way of supporting students' learning and their achievements at a high level, the second is making public aware. If there is a necessity for external accountability it should be organized by taking into account necessity of supporting teacher's professionalism and using data to support student's performances.

2.4 Highly educated teachers

As we have already mentioned in the previous chapters of this project work, success of Finnish education has been built by the factors like equality of education to everyone, flexibility of curriculum and the system itself, trust to every member of learning process, their responsibility and also collaborative relationship among them. All of this would be impossible without daily work of professional teachers whose competence is proved by diploma, committed teaching, organizational and collaborative work. In this chapter we will discuss the role of teacher in Finland, the reasons of high trust, teacher education and their daily functions.

The teaching profession is very popular in Finland. It can be noticed by the number of upper-secondary school graduates' applications to teacher education in eight Finnish universities. The total annual number of submitted applications to all five categories of teacher education programs is about 20 000. Every year only about 1/10 of these applicants are accepted to teacher training departments. To be accepted to university it is not enough to pass the Matriculation examination successfully (final graduation examination). Teacher-education candidates must have high scores in school diploma, university entrance examination, positive personality, excellent interpersonal skills and a great desire to work as a teacher. Also some prior experience in teaching or working with children is required. These personal

features of applicants are observed during an interview – the second phase of the university entrance examination. (Sahlberg, P., 2011, p. 73) As an example, let us take academic year 2011–2012. That year for the primary school teacher-education program at University of Helsinki there were 120 available places whereas the number of new applicants was about 2 400. (Sahlberg, P., 2011, p. 75)

We made an effort to find the reasons for this high competition and selective acceptance and decided that they must be analyzed from two sides: student's and officials' sides.

For students there are four reasons for choosing the career of a teacher:

– the first and the most significant is that teacher's work gives a lot of opportunities to fulfill their moral missions. In Finland people go to teaching due to their inner wish to work with students, to help them to find out their talents and strengths, and to get the idea of their weaknesses. (Sahlberg, P. 2011, p. 74)

– The second reason is professional autonomy and trust in planning, teaching, diagnosing, executing and evaluating. As far as teachers are highly trusted they do their work in the best way. Teachers' work is not externally inspected, measured or judged, no organization compares teachers and says one is better than the other. (Sahlberg, P. 2011, p. 76). Teachers are trusted to assess their students without tests, especially in primary school. The teacher assesses students' achievements comparing them to learning objectives. Students' everyday work, success or failure can be evaluated only by feedback, oral or written comments. Here only the final assessment at the end of course, semester or year has numerical assessment. (National core curriculum for basic education 2004, p. 260). Also a teacher's work is not measured by students' achievements. They have no external assessment till the ninth and twelfth grades when students take national examinations. Finns think, if a student fails an exam, it is not the teacher's fault, he/she has done everything to help the student.

– The third reason is that teacher education constitutes a master's degree program. University graduates with a master's degree can immediately go to work to school, apply to doctor's degree, work in government or local administration, teach in the university or work in private sector employment.

– The fourth reason is that in Finland there is no way to become a teacher except by graduating from one of eight universities and gain a master's degree. Teacher education takes from 5 to 7 years. (Ministry of Education, 2007)

As the fifth reason we wanted to mention salary but it is not so high and decided that it cannot be a reason to choose the profession of a teacher.

"Teachers earn slightly more than the national average salary" mentions Sahlberg in his "Finnish lessons". Also he compares teacher's salaries of different countries. For example, in Finland an average annual teacher's earning after 15 years of experience is about 41 000 US dollars, in the USA it is 44 000 US dollars, in Korea – 55 000 US dollars. So Finnish teacher's salary is lower than of those countries but as statistics shows similar to other OECD countries. (OECD, 2010) It means that students are not affected so much by money when choosing the career of teacher.

Accordingly to officials, i.e. the Ministry of Education, university administration, the government, they have their own reasons to hold such a demanding selection for teacher education:

– as we have already mentioned teachers enjoy great trust in Finland. Teachers are supposed to be professionals, they are trusted in curriculum planning, teaching without any inspections and competitions (Sahlberg, P. 2011, p. 76). That is why new teachers coming to the society must deserve trust for their professionalism, knowledge, skills, personal characteristics, love for children, by being committed to teaching and helping, etc.

– in every nation teachers are creators of new generation's mind and culture. This is another reason why teachers should be highly educated, responsible, open-minded and communicative.

– the curricula and requirements at teacher education are very demanding, challenging, research and practice based (Sahlberg, P. 2011, p. 77). A student with low scores in a diploma having less knowledge and skills than is required is not able to study at teacher training department.

– new teachers should be psychologically stable and strong: teacher's work is difficult, nervous and requires a lot of patience. A teacher should be able to find a way to student's heart, cope with various types of character, behavior and problems. This psychological moment is one of the main features searched for in the personality of an applicant.

No doubt, these qualities cannot be found in every applicant but they are extremely important. That is why the selection process is so demanding and not possible for everyone. Some failed applicants try to be accepted to the teacher training department for some years. Getting a diploma of university teacher graduates proves that they deserve trust and are ready to fulfill their responsibilities.

3. Results interpretation of the conducted research

In the practical part of our project work we are to describe and provide facts faced during the investigative period. Leading with the aim to get valid and realistic information on theoretical material of this research work we used different methods of investigation such as questionnaire, interview, lesson observations and school seminars attendance. These investigations were conducted at primary, lower-secondary and upper-secondary schools of Hämeenlinna town of Finland. The total number of participants is 33. Further paragraphs will describe and analyze the material of the research in comparison with the information provided in the theoretical part.

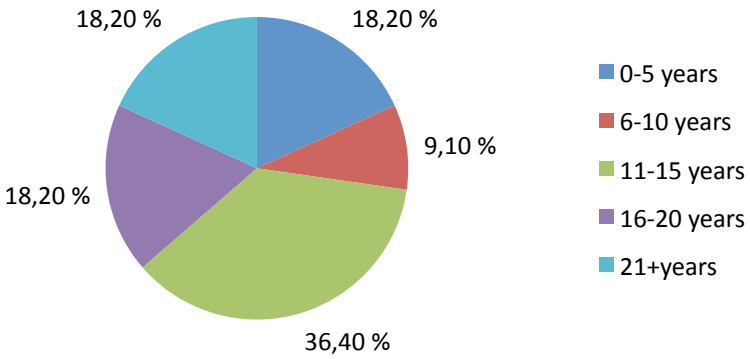

FIGURE 1. Questioned teachers' record of service

The questionnaire and interviews were answered by teachers who have diverse work experience as school teachers. As Figure 1 shows teachers' minimum record of service is up to 5 years and maximum is 21 and more years. The majority of participants, i.e. 36.4%, have on average 11–15 years of work experience. All the teachers have master's degree and moreover two of them have a doctoral degree.

In the theoretical part we have mentioned that teachers enjoy professional autonomy. The results of the questionnaire and interviews show how the teachers understand and feel professional autonomy. According to their words it allows them to plan their lessons, choose appropriate methods, teaching materials which suite best for a specific group they are teaching at the moment. They say that if they notice that some methods are not good for learning, they are free to try another one. Teachers do not need to show lesson plans and report their lessons that's why they have sufficient time to prepare another one or this can be used for learning. The professional autonomy also is understood by teachers as an opportunity to take risks and try new ideas by themselves.

Figure 2 demonstrates that 73% of questioned teachers think that they "are free to choose approaches, methods and materials for teaching" and the rest of teachers by autonomy imply freedom from administration control.

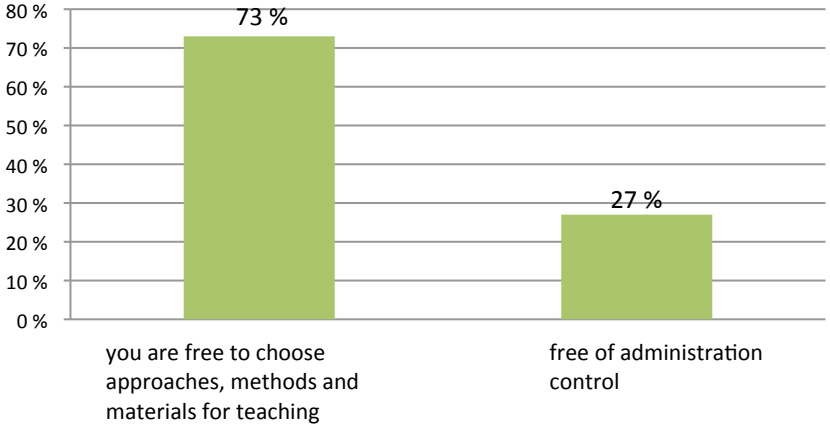

FIGURE 2. Percentage of answers to the following question: What is autonomy (pedagogical freedom) for you?

Interviewed principals have a common base and to some extent agree with their teachers concerning both approaches to autonomy. The principals claimed that they do not need to control teachers and these headmasters were even astonished that they should even control teachers. Although principals admitted that there was some control they said that it is invisible. Not only do teachers account to the principal but the principal is also accountable. He/she reports to teachers about his/her work and results at the end of an academic year.

At the same time school leaders are interested in results of students and what is happening in the classroom. They gather information and get feedback from students and parents and colleagues. Twice a year they go to the class with the purpose of observation and once a year there is a discussion with teachers where pedagogical issues are considered. Principals' answers coincide with the teachers' where they mention an interview with the principal conducted once a year to reflect on the previous year, to plan and define objectives for the next year's work.

Most of the teachers answered that administration knows about their work in different ways particularly via students, parents, colleagues. Also they pointed out course marks are entered into the Wilma database which provides school administration, municipalities and parents with appropriate information and statistics. It releases teachers from paper work, reports, etc.

According to the Finnish practice, power distance between teachers and principals is quite low and it allows them to interact effectively. Principals spend a part of their time with teachers, talking to them and discussing various questions.

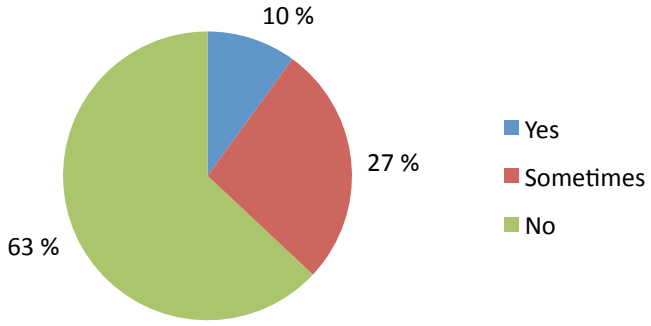

FIGURE 3. Percentage of answers to the following statement: "Principal constantly tells teachers to raise students' achievement scores".

In the theoretical part we have said that teachers obtain full autonomy in teaching, and students are themselves responsible for their own results, especially in upper-secondary schools. From the questionnaire conducted among different school teachers we were assured that it is partially so. If you consider Figure 3 you can see that 63% of teachers denied that a principal asks to raise students' achievement scores. However 37% admit that it happens. The teachers who agreed with the statement are from upper-secondary schools where students take a Matriculation examination, the most difficult and important testing in school period.

Organization of courses and timetable attracted our attention at both primary and upper-secondary schools. In the primary school teachers have a chance to mix students of different classes studying at one grade for some educational, recreational purposes. It can be done thanks to the timetable where one subject for all classes of one grade is put at one time. For instance, mathematics for the students of all 3 classes of grade 5 is at 12.00. The second amazing thing concerns choice of courses at upper-secondary school. The curriculum defines 75 compulsory courses for everyone and other courses are up to students. They choose voluntary courses to study some subjects more deeply. And the most interesting thing is that students can study some courses in other upper-secondary schools if their own school does not have them. The courses studied at other schools will be written into school diploma. A lot of students use this right and study 2–3 courses at other schools.

In comparison with primary and secondary schools teachers in upper secondary schools are under pressure and meet more difficulties. During lesson observations we have noticed that teachers tend to "pedagogical conservatism" or saying it in other words they are more inclined to teacher-centered way; this is also confirmed by some authors. For example, Lingard (2013) says: "While teacher pedagogies appear to be teacher-centered, they are intellectually demanding". There are two explanations for that approach. The first reason is the number of students in one class which can be up to 40 students. The second reason is lack of time to cover all the topics from curriculum in time. This situation happens because upper-secondary school differs from comprehensive one by its status. They are not compulsory for everyone. It defines upper-secondary school's financial and organizational conditions which are more struggling compared to comprehensive school's terms.

All the answers concerning the question about administration's awareness of teachers' work emphasize that trust between administration and a teacher is important. In the questionnaire every teacher agreed with the sentence that working in a 'high-trust' environment makes a teacher a more effective professional in promoting student learning. Moreover one teacher commented that if there was no trust and autonomy, he/she would not work as a teacher.

In Finnish schools it is not only administration that believes in teachers and trusts them but also teachers trust and appreciate each other. When we gathered the questionnaire results on the question: "What is the basis of trustful relationship between the staff of the school?" we found only positive messages (Fig.4). No one demonstrated competition, envy or any other negative emotions. As you can see in the diagram of Figure 4 the majority of teachers (36%) think that all teachers are highly qualified. In answers some of them claimed that they can rely on each other's professional competence because of good teacher training. These answers can serve like evidence on high quality teacher education in Finland about which we have discussed in the previous part.

The second common answer (28%) in Figure 4 is connected to a good and healthy atmosphere among the staff members. A lower percentage but having great importance are replies to openness of information (9%), fair rules of work (9%) and having one common aim (18%). All these answers give a picture of a trustful, healthy, friendly atmosphere of work in Finnish schools.

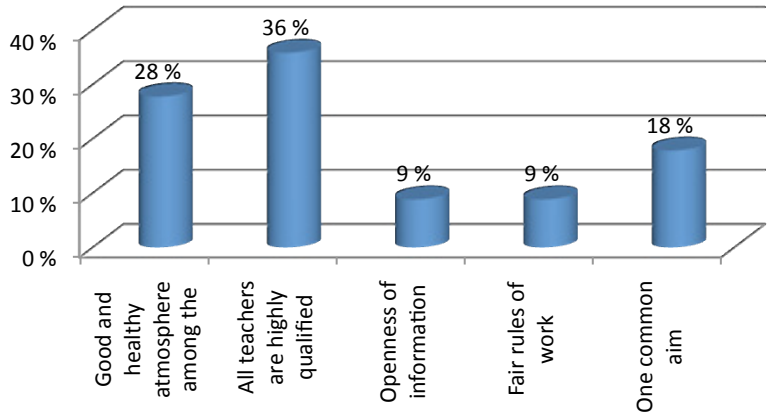

FIGURE 4. Percentage of generalized answers to the following question: What is the basis of trustful relationship between the staff of the school?

Collaboration and cooperation are highly appreciated by teachers and principals. In the questionnaire teachers explained their desire to work in a collaborative environment. Combining the meanings of their opinions we have defined collaboration as a supportive and helpful medium with open and free atmosphere for knowledge and experience sharing which can serve as a way to meet the students' needs. One participant also mentioned that the Finnish school system does not really have any competitive environment. However there was a case during an interview with a subject teacher, when she admitted the existence of competition among teachers in one subject in the upper-secondary school. But this competition concerned the number of students they teach because students can choose a teacher for a course: the more students the higher the salary.

During a visit to Seminaarin Koulu primary school the principal gave a presentation about the school and spoke about teachers' teams (Figure 5). There are 12 teachers' teams at school where six teams refer to grades 1–6 and 6 teams refer to teacher's interests. According to this division each teacher should belong to two teams class-based and development. Each team has a leader who plans and organizes work of team. According to principal "team leaders have autonomy to plan and organize their work by themselves". Principals in some cases can interfere into team's work but he should have strong reason for it. This person chooses a grade team where he/she works and another team due to his/her professional interests. Each of these teams meets once a week for an hour to discuss current issues, to solve problems, to assist each other, to support younger teachers, to define future tasks, and to plan.

School and education conditions we have described in the theoretical part really exist and as evidence we can offer our observations made during Seminaarin Koulu primary school visit. We were allowed to attend special needs classes, special rooms and ordinary classes. We noticed that there were wheelchair ramps all over the school. Special classes are equipped

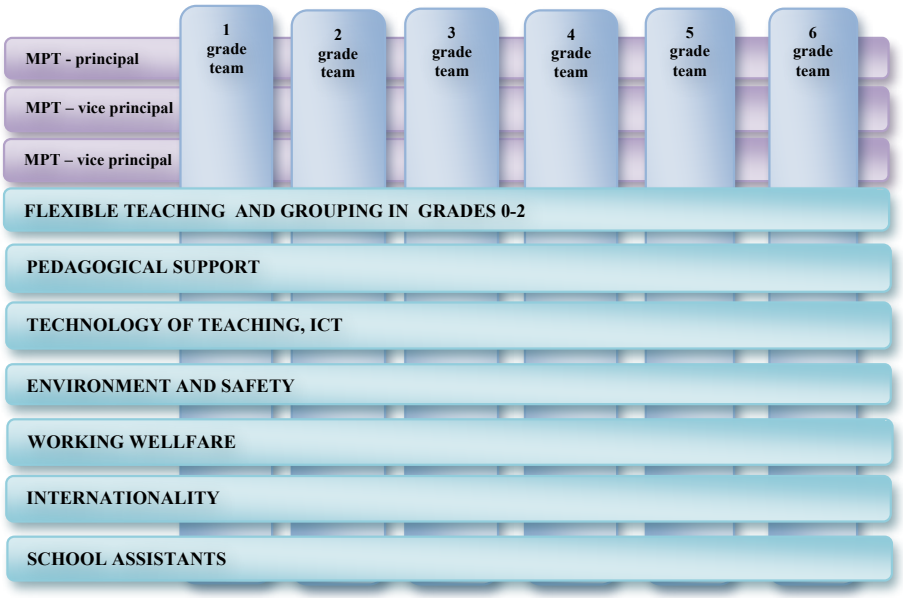

FIGURE 5. Team-based work in Seminaarin Koulu.

with wheelchairs, special textbooks, learning materials, cushions and convenient furniture. Rooms for autistic students are organized unlike a classroom, but like a living room with a number of learning materials where people feel comfortable and safe. Not far away from these rooms there were special "black" and "white rooms" organized with remedial purposes for students suffering autism. Disabled and ordinary students were having lunch together, walking in the same building. It means that Finnish special needs students are not isolated, they are integrated into society and students get used to seeing and communicating with disabled people which is very important in our diverse life.

At primary school we also saw immigrant students who studied the Finnish language and some other subjects. They have to study in special classes for immigrant students for one year. Later, they are transferred to normal classes to continue their studies in Finnish.

During our lesson observations and school visits we noticed that relationship between teachers and students is different from that of ours. Power distance between teachers and students is low. Students call their teachers only by name or even nickname what surprised us very much. Teachers and assistants treat even primary school students as adults, speak seriously to them. As a result students of primary and upper-secondary school behave well, take the words seriously, are very organized and they are not naughty at all. However we cannot say the same words about the students of lower-secondary school because they are in transitional age and their behavior varies.

What about lunch? It is free and healthy for every student of Finnish schools. We have visited some schools and had lunch at their school restaurants. Students were offered salad, a hot meal with meat, fish or chicken, bread, butter, water and milk. So their lunch is healthy and full.

At the end of our questionnaire we asked the Finnish teachers' for their own point of view on the reasons of Finnish excellence in education. As a result we have got the expected answers which can prove the theoretical part of our project work. The majority of responded teachers, 37%, are sure that success comes from teachers, their high quality education supported by a master's degree. The second place in earning success is given to trust, equality of education and schools. Although other answers have a lower percentage they are nevertheless very important. We also generalized the teachers' responses and obtained the following opinions: different learning and teaching methods, national core curriculum, appreciation of education in society, less pressure on students at schools, hard-working students and earlier recognition of students' talents, needs and special needs. However 9% of respondents did not consider Finland as the best country in educational field, but they agree that it is good and has some distinguishing features such as trust and excellent teachers.

Conclusion

The aim of the project work was to investigate functionality of distinctive features of Finnish schools. In conclusion we can confidently say that the aim has been reached successfully. A number of different works such as learning and describing theoretical material, research methods application and analyzing the results of the research has been done.

So, both theory and practice prove that distinctive features of Finnish education are equality, flexibility, trust, autonomy, low level of power distance and excellent teacher training programs.

Education in comprehensive school is compulsory, equal and free for every student regardless of his/her social status, gender, religion, health and place of birth. Also schools are equal all over Finland in spite of their location whether they are situated in a big city or little town. Schools are equally financed, equipped with furniture, technical devices and learning materials. However, upper-secondary school is not compulsory for everyone and this fact defines upper-secondary schools' financial and organizational conditions which struggle more compared to comprehensive school.

The national core curriculum is flexible, more general and practical. It gives an opportunity for towns and schools to change it according to their students' needs, local peculiarities, courses, etc. Flexibility can also be met in choice of courses at upper-secondary school

An important role in equal conditions is played by the Finnish welfare state. These equal conditions are early childhood care, free lunch, voluntary preschool, health service and preventive measures to identify possible learning and development difficulties.

The administration of Finnish comprehensive schools developed from strong control in the past to certain school's autonomy these days. Thanks to decentralization Finnish schools have autonomy and large power to decide different questions that is connected to school and staff management, curriculum, instruction and using resources. Finnish teachers have certain autonomy in organizing their work, using teaching methods, resources and evaluation. The professional autonomy of Finnish teachers is quite high and they can decide by themselves what to do and how to do in terms of their knowledge and experience. The conducted research work showed that teachers really enjoy autonomy as freedom of control and an opportunity to use their own way of teaching, take risks and try new ideas by themselves. School principals mentioned that there was almost no control and pressure on teachers. However, in comparison to primary and secondary schools teachers in upper secondary schools are under pressure and meet more difficulties. They are more inclined to teacher-centered way because of high number of students and courses.

Finland enjoys the culture of trust in education. As Pasi Sahlberg says "the culture of trust meant that education authorities and political leaders believe that teachers, together with principals, parents, and their communities, know how to provide the best possible education for their children and youth". According to Finnish practice power distance between teachers and principals is quite low and it allows them to interact effectively.

In Finland educational accountability keeps and enhances trust among the participants of the learning process. Trust leads them in the process, which offers a strong feeling of professional responsibility and initiative. Finland differs from other countries with a lack of inspections, standardized curriculum, and test-based accountability. Finland created an intelligent accountability policy which keeps trust among all members of the educational process. As research shows school leaders and teachers are equally accountable to each other. Most of the questioned teachers answered that administration knows their work through different ways particularly via students, parents, colleagues and the Wilma database.

Teachers are greatly trusted because they are professionals whose competence is proved by diploma, committed teaching, organizational and collaborative work. To become a teacher one must graduate from university and gain a master's degree. Although it is very difficult to be accepted to teacher training university and study there, teacher education is very attractive among students. Getting a diploma of university teacher, graduates prove that they deserve trust and are ready to fulfill their responsibilities.

Indeed, the research work demonstrates that teachers trust each other's competence, work collaboratively in teams and in general, have trustful, healthy and a friendly atmosphere at school.

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APPENDIX 1

QUESTIONS FOR INTERVIEW WITH PRINCIPALS

1. Why is Finland so good in education from your point of view?
2. What is school autonomy and what is teachers autonomy (pedagogical freedom) for you? How does it help to learning process?
3. How are trust and responsibility connected to each other in your point of view?
4. In what extend are teachers controlled by school administration? What would change if school administration preferred control to trust?
5. What is collaboration and competition for you?
6. Do you agree that counseling work at school is one of the reasons of success in PISA?
7. What is leadership for you? Is leadership theory familiar to you? Are you leading as well as managing your school?
8. Are you focusing as a leader on school improvement? How do you do it?
9. What is the Finnish leadership style?

APPENDIX 2

QUESTIONS FOR INTERVIEW WITH TEACHERS

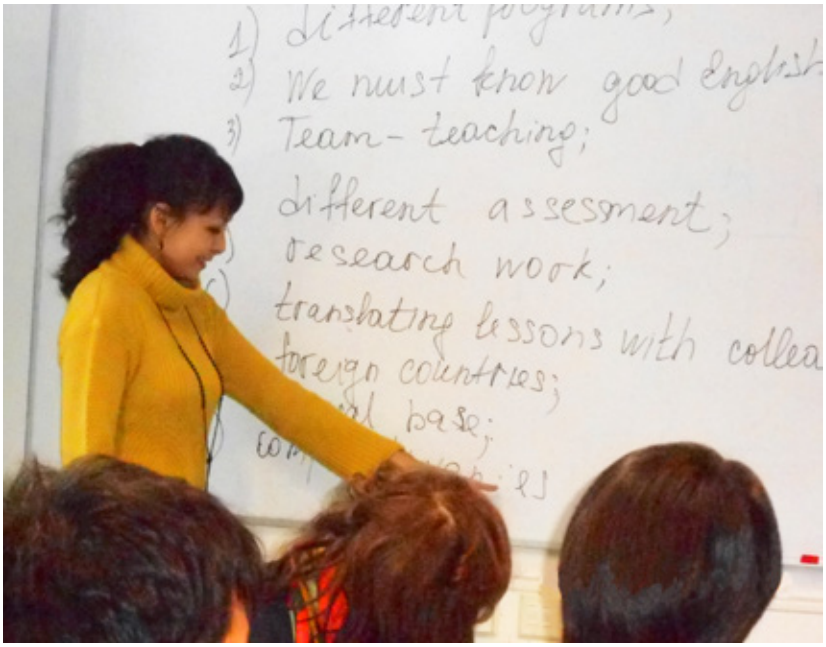
1. What is educational autonomy for you? How it helps you in your work?
2. Why is Finland so good in education from your point of view?
3. Can you say that what I teach in my class is determined for the most part by myself? What would happen if you had to follow exact rules?
4. How are trust and responsibility connected to each other in your point of view?
5. In what extend are you controlled by school administration? What would change if school administration preferred control to trust?
6. What types and methods of assessment do you use?
7. How often do you conduct summative assessment?
8. What is collaboration for you?
9. How much is it difficult to become a teacher in Finland?

APPENDIX 3

QUESTIONNAIRE FOR SCHOOL TEACHERS

1. Please indicate the type of your school.
   a) Primary b) Secondary c) Upper-secondary
2. Which subject do you teach?
3. How long have you been working as a teacher?
   a) 0–5 b) 6–10 c) 11–15 d) 16–20 e) 21+
4. How many years have you been a teacher at your present school?
   a)0–5 b) 6–10 c) 11–15 d) 16–20 e) 21+
5. What is your degree?
   a) Bachelor b) Master c) PhD
6. Teachers can take risks and try new ideas/techniques by themselves.
   a) Strongly disagree b) Disagree c) Agree d) Strongly agree
7. Principal constantly tells teachers to raise the student achievement scores.
   a) Yes b) No c) Sometimes
8. How is school administration aware of what goes on in your classroom?
   a) By lesson observation b) Via parents c) Via students d) Via colleagues
9. Teachers are provided appropriate professional development resources and opportunities.
   a) Strongly disagree b) Disagree c) Agree d) Strongly agree
10. Working in a 'high-trust' environment makes a teacher a more effective professional in promoting student learning
    a) Strongly disagree b) Disagree c) Agree d) Strongly agree
11. Teachers have the time to work collaboratively
    a) Strongly disagree b) Disagree c) Agree d) Strongly agree
12. School leaders share decision-making with staff members
    a) Strongly disagree b) Disagree c) Agree d) Strongly agree
13. Teachers in my school work together in teams
    a) Strongly disagree b) Disagree c) Agree d) Strongly agree
14. What is the basis of trustful relationship between the staff of the school?
15. How does educational autonomy help you in your work?
16. Evaluate the degree of your autonomy. 1 is minimum, 5 is maximum
17. Write down 1–2 reasons of why Finland is the best in education.

18. Is there any competition between teachers?
a) Yes b) No c) Sometimes
19. What advantages do you enjoy working in high-trust environment?
20. What is autonomy (pedagogical freedom) for you?
a) free of administration control
b) you are free to choose approaches, methods and materials for teaching
c) you may not follow the curriculum
21. Write down 3 teaching approaches, methods which you use.
22. In which environment do you prefer to work: collaborative or competitive? Why?
23. Do you make up a professional development plan? If yes, for how many years?
24. How do you demonstrate your achievements or failures of plan implementation?



Interns collaborate on research findings

REDISCOVERING THE ROLE OF THE TEACHER

Yessengaliyeva Nurlygul
Mathematics teacher Gymnasium No42 "Akniet" Uralsk city,
Republic of Kazakhstan

Background

After her teacher training in HAMK PTEU in conjunction with JAMK, Ms Yessengaliyeva returned to Kazakhstan to teach within a trilingual learning environment. This has pushed her to discover and adopt suitable methods and approaches acquired in the 9 months in Finland. One major shift for her was from teacher-centred to learner-centred. Her teacher identity altered in Finland to accommodate her desired growth as a professional. The key of the student-centred approach will allow her to embrace the new educational technologies including hardware and software. It will allow her to speak the language of the student of the 21st Century.

The e-learning pedagogy within the Bolashak programme provided the opportunity to experiment and use the technologies in a student-centred way. This was specific to maths in the case of Ms Yessengaliyeva where she produced materials, testing them out in the classroom.

As a footnote HAMK teachers had commented on the author's growth as being exception especially in English. This hard work enabled her to understand more deeply the theories and practices offered to her during the 3 months of pedagogical training and practice.

The responsibility of the teacher

The profession of the teacher has always been and remains one of the most important in the world. For teachers it is not only fun and interesting, but at the same time it has full liability and responsibility for their students for their future and the future of the younger generation, and, in the end, the future of their country. On the teaching profession, its significance is very accurately reflected in the words of the Kazakh poet Gafu Kayrbekov "Being a teacher – is the courage that comes from the heart" and in the words of the great Russian scientist Mendeleev "Teacher working on the most important task – it forms a human". Indeed, the teaching profession is so responsible that it requires great courage; the courage to take responsibility for the future of an entire generation, an entire country. To date, the teaching profession has not lost its relevance and importance; on the contrary, the modern world dictates for all teachers, new criteria, new challenges and higher requirements.

Our 21st century is a century of innovative technologies. And now our students are not interested in sitting behind a desk and gaining knowledge from textbooks. They are much more interested in handling complicated characteristic capabilities of their mobile phones, computers, iPhones and their applications. Therefore, the main task of the modern teacher is to build on the learning processes that are interesting to the student's "language", and today this "language" is the "language" of technology. Only the teacher, keeping up with the times and the ability to apply not only to modern teaching methods, but also information technology into their classroom will be able "to lead" their students to interest them in the educational process. That is, it seems to me that an important lesson is to use modern information technology, along with the use of modern teaching methods. These two factors can increase the effectiveness of the learning process and make it more fun and interesting for the student.

Yes, the modern world does not stand still, and every day we have the opportunity to increase our knowledge and expand the boundaries of knowledge, and as teachers, learn a lot of new teaching methods and approaches, and replenish ourselves to share with our students. Previously, I saw the use of modern information technology in the classroom, as a small element used at some stage of the lesson, which helps increase the effectiveness of a particular lesson, rather than the learning process as a whole. And the application of information technology as an integral learning tool, such as textbooks, notebooks, etc. it was new for me. I learned during the passage of pedagogical training in HAMK a wide range of applications of modern innovative technologies in the classroom.

I, like many of my colleagues were lucky enough to win a scholarship under the presidential program "Bolashak" the passage of teaching internship abroad. We had the opportunity to complete an internship in Finland, in Häme University of Applied Sciences in Hämeenlinna (HAMK). HAMK – a multidisciplinary university of applied sciences, offers high-quality education, based on research, development and internationalization. For all of us it was a unique opportunity to learn and see the Finnish education system first hand from the inside; to get acquainted with the peculiarities of the Finnish education system, which led to such a high performance in PISA. Finally, it was the opportunity to learn from the advanced experience of Finnish colleagues and, of course, look at the processes of education from another angle.

In conclusion, I wish to refer to the words of poet and philosopher R. Emerson, who claimed that the secret to successful parenting lies in respecting the pupil. And I would like to note that whatever methods or modern computer technologies the teacher uses in their classrooms, it will always be correct if it is to wonder, "What my students need" rather than "What do you need from me" and to build the learning process interests of students. Only in this case, the learning process will have a positive outcome. And it will not be a boring learning process, and will be a fascinating journey of discovery for the teacher and student in the Country of Knowledge.

Resources: http://www.hamk.ru/about.html

FINNISH PEDAGOGICAL APPROACHES: TEACHING IN THE MOST STUDENT CENTERED WAY

Rinat Zhumabayev, Zhanat Zhuldassov, Maaret Viskari, Brian Joyce

Contributions by authors: Rinat Zhumabayev and Zhanat Zhuldassov have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

The authors concentrated on the cooperative nature of the teacher-student relationship in Finland. They had a clear objective to learn about collaborative learning, problem-based learning, the use of the flipped classroom method and e-learning pedagogy as well as dialogical methods. Through their student-centered experiences in this Bolashak programme and through observation, research and piloting methods and ideas in Finland, they were able to create a model that could be adapted in Kazakhstan. As an example, the authors deconstructed and reconstructed the components of collaborative learning and analyzed problem-based learning where they reflected on the paradigm shifts necessary in Kazakhstan. The aim was to incorporate self-directiveness and the connection of real-life situations into learning. Consequently, they pre-pared two teacher training seminars in Nazarbayev Intellectual Schools. At the time of publication Mr Zhumabayev is building a flipped classroom community in Maths, and Mr Zhuldassov is responsible for pedagogical excellence in the Nazarbayev Intellectual School organization (NIS).

This article follows the theory, research and practical aspects they needed in order to meet their objective. In essence, it encapsulates the Finnish effect on foreign teachers wishing to implement best practices.

Abstract

Over the years, there have been numerous attempts to identify the key to Finnish success. This issue can be seen as a first step to discover the secret of Finnish pedagogical approaches in fostering self-directed students.

In this study authors researched the implementation of pedagogical approaches which are pertained to the most student centered way of teaching in Finnish Upper Secondary School. The study researched the influence of the student centered way of teaching on the study process in Finnish schools. The findings were based on the teachers' and students' answers to the questionnaires. Moreover, 25 students and 8 teachers were interviewed. After, their answers were analyzed. The analysis addressed

a. to what extent Finnish teachers use a student centered way of teaching
b. to what extent Finnish students are satisfied with their teachers' pedagogical approaches
c. to determine the advantages of Finnish education system from the US student's point of view (one student interviewed was on exchange from the USA)

The study suggested the following pedagogical approaches:

a) Collaborative learning
b) Problem based learning
c) Dialogical method

It concluded that other student-centered ways of teaching are cornerstones of bringing up self-directedness of students.

Developing a problem-based learning approach

1. Introduction

1.1 Reasons for choosing this topic for our work

In this fast developing era in every field including the education system and its method of teaching and learning, the teaching profession takes an important place and is crucial in fostering a new generation, and as in other professions is changing and becoming one of the challenged professions. In order to be competitive in the job market modern teachers have to be a good critical thinkers with the ability to work in groups as well as organize collaborative learning and teaching, have communication skills and have a high level of competence in contemporary pedagogy approaches. Because we are math teachers and have to always enrich our pedagogical competences we have decided to choose this topic 'Finnish pedagogical approaches: teaching in the most student centered ways', and we would like to learn and find out about different teaching approaches which are very productive and modern and especially pay attention to the student-centered way of teaching.

Because Finland takes one of the top places in the field of education we came here to observe from the inner side of this system and find out the advantages of its education system. Afterwards, we need to implement the best experiences in Kazakhstan education schools. In the process of observation we noticed (Figure 1) the following reasons or advantages in the Finnish education system for being successful in the world education field:

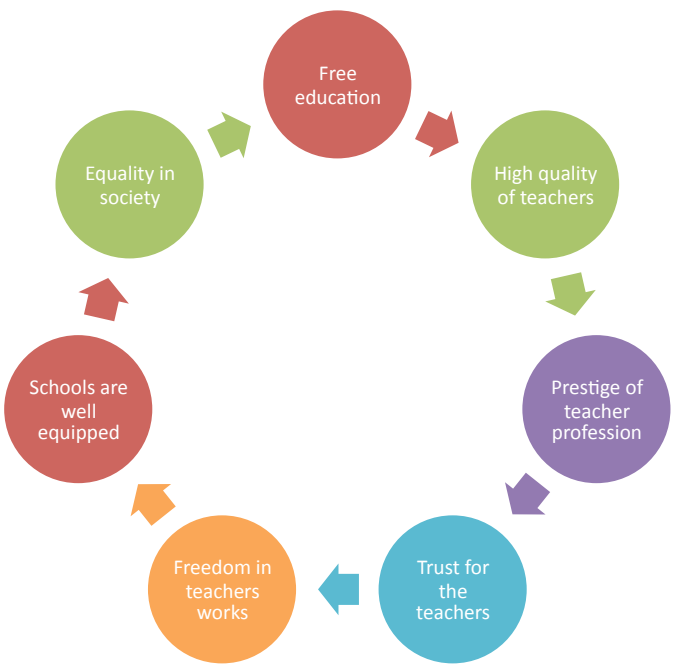


FIGURE 1. Advantages in Finnish education system for being successful in the world education field

Also, when we were observing the Finnish education system we noticed that one of the advantages of this system is fostering students to be self-directed from the earlier years and Finnish teachers often used Project Based Learning (PBL), collaborative learning (group work, joint intellectual work) and dialogical methods when creating new knowledge for the students. We planned to observe the using of these methods in Finnish schools and universities, in their lessons as well as in the International Professional Teacher Education (IPTE) courses of Häme University of Applied Sciences.

There is one no less important purpose that we challenged which is English language, we plan to make this development work and also improve our English vocabulary in pedagogical terms and fields.

The main objectives of this work are:

– To learn, explore and pay attention to the student centered way of teaching as an essential teaching approach, because it is one of the main differences between the education system in Kazakhstan and the Finnish one. In order to observe the Finnish education system in depth and first hand, we attended different educational organizations and schools and we noticed that behavior of Finnish students is more closely to adults, they are already self-directed and have a serious attitude to gain knowledge when compared to our Kazakhstan students. And the main reason for this we suppose is that the 'student centered way of teaching' in Finnish schools is used widely compared to Kazakhstan schools, so it is important to develop and implement these approaches in our schools, based on the data which we get through surveys.

– In the process of researching 'the most student centered way of teaching and learning', in order to share our understanding about modern pedagogical approaches we plan to conduct two seminars for Kazakhstan teachers. The first workshop is going to be about 'Collaborative learning' and second workshop about 'Problem based learning'.

– To create a helpful handout in which we are going to tell about essential activities, which can be useful for upper secondary school teachers to support in their work the approaches which are 'most student centered'.

– Research about the implementation of the Most Student Centered Way (MSCW) of teaching in Finnish upper secondary schools, by surveying the local teachers views about it as well as students views.

– By doing this project we will use IPads and flipped classroom and video lessons, so we can improve our IT skills too (iMovie I books book creator etc).

– Of course do not forget about English because all the work is going to be written in English and by this we will improve our English level in pedagogy.

2. Theoretical part

2.1 Importance of student centered way of teaching

The MSCW of teaching and learning is a way in which students will try to learn new material or gain knowledge with a minimum influence of a teacher or guidance, and teachers can be only a facilitator for them rather than resource of acquisition of information or knowledge.

Kazakhstan teachers often use the traditional method of teaching and mostly a teacher centered way of teaching rather than student centered. So, how can we use pedagogical technologies and methodic in order to make teaching more student centered learning, though it is more difficult to teach school students rather than adults by using this way?

There are methods: collaborative learning, team based learning, problem based learning, flipped classrooms, using ICT, and Dialogical method, (Fig 2) which allow you to teach in a more student centered learning way, however all these things depend on the quality and ability of a teacher, especially when you are working with children and busy curricula, who has to be able to organize this work and really appreciate his or her job and love it.

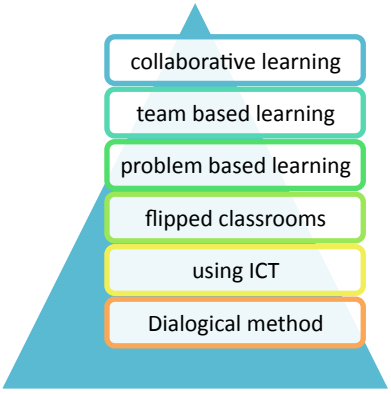


FIGURE 2. Appropriate methods to maintain MSCW

In the opinion of the authors, in order to use MSCW of teaching, a school teacher has to be able to take these into account:

– to see in which situations teaching results can give better outcomes for the student, most learner centered way or others
– to imitate situations in which students would feel the responsibilities for finding answer for the questions or solution to problems
– Even if it is impossible or inconvenient to use MLCW for the whole lesson then try to use it for a small part of a lesson
– In order to increase the ability to learn themselves teachers always need to encourage the students who want to learn with MLCW, and tell them that with MLCW they can truly develop their knowledge
– As it is an ability to learn themselves and some kind of taking responsibility for their study, teachers need to assess them in this quality
– While working with adult students in order to help them the teacher needs to be able be their 'support' rather than a strict teacher and have a good rapport
– To be able to have a dialogue with your students and create knowledge and teach your students to be able for real dialogue – this is essential

How does MSCW of teaching and learning approaches differ from the traditional approach?

- In the MSCW of teaching and learning, learners work together and build knowledge in a team rather than compete with each other individually.
- In the MSCW lessons students are more active rather than a teacher in the traditional way of teaching.
- in MSCW a teacher's behavior is as facilitator-being able to give responsibility for learning to the students.
- MSCW of teaching and learning can take place at any conventional time for the students – for example, when they help each other with homework.
- MSCW of teaching and learning takes place when students work together in the same place on a structured project in a small group. Mixed-skill groups can be especially helpful to students in developing their social abilities.
- Because it is just one of a set of tools, however, it can easily be integrated into a class that uses multiple approaches. For some assignments individual work may be most efficient, while for others cooperative groups work best.
- Research suggests that MSCW of teaching and learning bring positive results such as a deeper understanding of content, increased overall achievement in grades, improved self-esteem, and higher motivation to remain on task.
- MSCW of teaching and learning helps students become actively and constructively involved in content, to take ownership of their own learning, and to resolve group conflicts and improve teamwork skills.

There are many pedagogical approaches and methods through which teachers can develop self-effectiveness or more adult-like behavior of students. Nevertheless, we would like to underline the effectiveness of using collaborative learning, PBL, dialogical methods, authentic learning in teachers' work which will help to improve self-defectiveness of students.

2.2 Collaborative learning

Collaborative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product. Many other pedagogical approaches are inside collaborative learning, so we can say that collaborative learning can be used as an umbrella term for a diverse of approaches in education (Fig 3) that involve joint intellectual effort by learners and other participants of learning process.

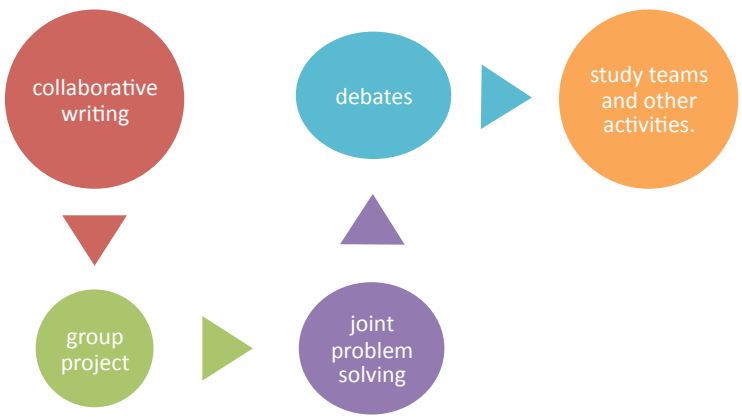


FIGURE 3. Collaborative learning activities

By working in a collaborative team learners may produce the individual parts of a whole task and then "assemble" the final work together, as a team. Each learner takes responsibility for their part of assignment and also for the successful work of the team as both products are assessed. This type of pedagogical approach is based on the idea that learning is a naturally social act in which the participants talk among themselves and can freely share knowledge. It is through the dialogue that learning occurs; learners have the opportunity to converse with peers, present and defend ideas, exchange diverse beliefs, question other conceptual frameworks, and be actively engaged. (El Emary, 2012)

A learning exercise only qualifies as CL to the extent that the following listed elements are present:

1. *Positive interdependence.* Team members are obliged to rely on one another to achieve the goal. If any team member fails to do their part, everyone suffers the consequences.

2. *Individual accountability.* All students in a group are held accountable for doing their share of the work and for the mastery of all of the material to be learned.

3. *Face-to-face interaction*. Although some of the group work may be parceled out and done individually, some must be done interactively, with group members providing one another with feedback, challenging one another's conclusions and reasoning, and perhaps most importantly, teaching and encouraging one another.

4. *Appropriate use of collaborative skills.* Students are encouraged and helped to develop and practice trust-building, leadership, decision-making, communication, and conflict management skills.

5. *Group processing*. Team members set group goals, periodically assess what they are doing well as a team, and identify changes they will make to function more effectively in the future." (Johnson, Johnson, and Smith, 1991)

Proponents of collaborative learning claim that the active exchange of ideas within small groups not only increases interest among the participants but also promotes critical thinking. According to Johnson and Johnson, there is persuasive evidence that cooperative teams achieve at higher levels of thought and retain information longer than students who work quietly as individuals. The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers. (Gokhale, 1995).

The advantages of collaborative learning are:

- higher academic achievement and deeper understanding of learned materials, promotes deep learning of course materials trough diversity of perspective fostered by interactions between peers and as a result students achieve better grades in CL than competitive or individual learning
- students develop their high-level reasoning and critical thinking skills (reflection, sharing views with peers)
- greater time on task and less disruptive behavior in class
- lower levels of anxiety and stress and more positive and supportive relationships with peers
- greater motivation to learn and achieve

Learning how to interact.

- greater ability to view situations from others' perspectives
- Students learn more by doing something active than by simply watching and listening. Weak students give up when they got stuck while working independently. If they are working cooperatively they keep going. Strong students improve their knowledge while explaining and clarifying materials to weaker students and finding gaps in their own understanding, they can fill these gaps.
- students learn social skills through interacting with each other and civic values
- students achieve personal growth and positive attitudes toward their peers through getting to know each other better
- students develop a positive attitude toward autonomous learning
- Students are willing to take some risks with their learning

2.3 Problem-Based Learning

There has been a shift recently from traditional lessons to more student self-directed courses which include real-life scenarios. Within the shift we see the teacher changing from 'sage' to 'guide'. None more so than in problem-based learning (PBL).

"In PBL courses, students work with classmates to solve complex and authentic problems that help develop content knowledge as well as problem-solving, reasoning, communication, and self-assessment skills. These problems also help to maintain student interest in course material because students realize that they are learning the skills needed to be successful in the field." (Stanford University Newsletter on Teaching, Winter 2001)

In traditional teaching teacher's function is more reproductive – student's main function is performing tasks according to the pattern on a particular algorithm. In PBL student looking for a solution himself a new process for him, the problem, thus, he learns to apply knowledge to new situations and to independently develop an algorithm for solving the problems.

PBL should allow for multiple perspectives. Students need to have the freedom to choose which perspective interests them and allows them to become engaged in the learning process.

Problem-based learning is generally can be described as a strategy of solving series problematic situations which created for educational purposes and arising consequently.

1. Students are faced with the need to use previously acquired knowledge into practice in new situations. At the same time they feel the lack of knowledge and skills to solve practical problems. This realization turned on cognitive interest and encourages the search for new knowledge.

2. Students do not know the method to solve this problem, i.e., they are aware of lack of previous knowledge to explain the new fact.

3. There is a contradiction between the theoretically possible way of solving the problem and the chosen method is impracticable.

4. There is a contradiction between the result achieved practically run job training and lack of knowledge for its theoretical basis. In my practice I use a problem-based learning methods such as problem-presentation of the material, the search conversation, self-search and research students.

5. "Because PBL is self-directed and is based on real-life situations, students gain self confidence in being able to resolve problems that they might face in everyday activities. Being able to successfully solve problems in the classroom can correlate to self confidence in solving problems outside the classroom as well." (Utecht, 2003)

Dialogical method or DIALE

DIALE method is extremely important in collaborative thinking and knowledge creation processes in a learning community. In an optimal situation, a person has an opportunity to learn these actions already during one's childhood or adolescence. Non-fuzzy dialogue is lively and does not stray from the topic. It is important to learn to direct one's attention to one's dialogical actions, one at a time.

"Learning and knowledge creation situations that are based on the methods can be designed and carried out in various ways. Choose a method and plan how to use it in order to teach certain theoretical or practical skills/knowledge or how to use it in knowledge creation situations. Once a certain method has been used often enough, every participant will have learned to work in the way required by that particular method. Alternate between the methods to create dialogue-based situations. For a theme of dialogue and collaborative knowledge creation, choose a topic that furthers the participants' thinking or develops the target topic. You can also ask the participants to choose an appropriate theme. Display the method to the participants and give them the instructions. The DIALE method concentrates on the transfer of unique and active pedagogical innovation, independent of the field of education. In addition, the target group includes in-company trainers and teachers working in further education services." (Aarnio, 2012)

Dialogic attitude

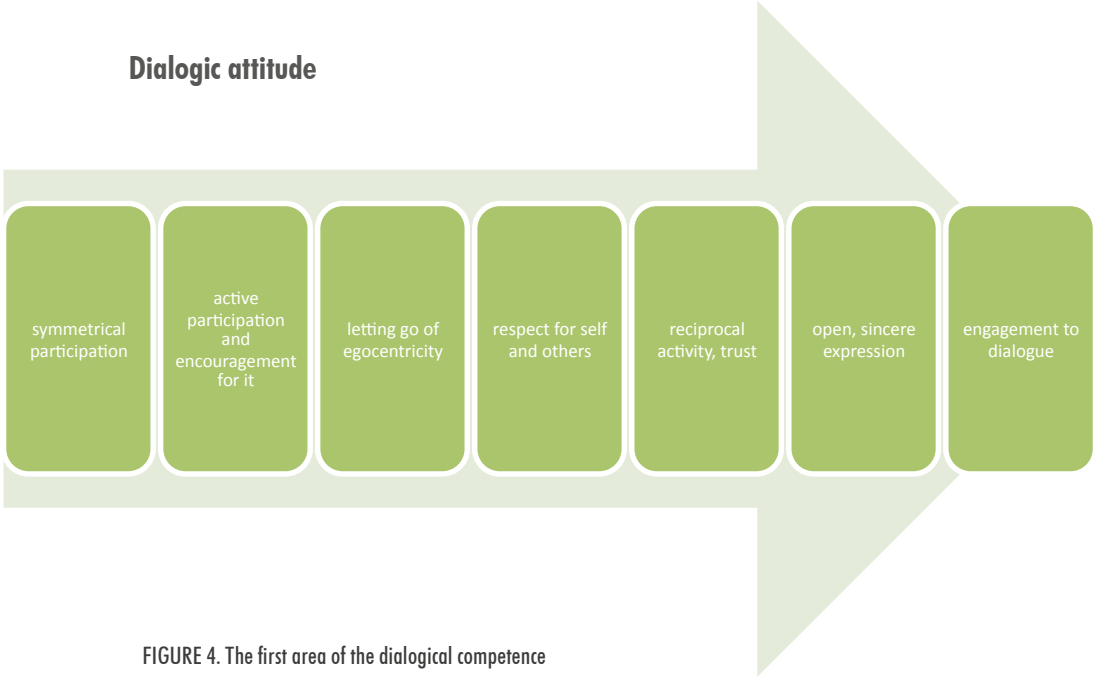


FIGURE 4. The first area of the dialogical competence

Methods

- Symmetrically
- As equals
- Monitoring body language
- Without ulterior motives
- Reciprocally

Method 1: Spontaneous participation

The goal of this task is that every person in the learning community will participate freely and spontaneously. The crucial principle in dialogue is that one is allowed to be imperfect and one's thinking under development.

Method 2: Cultural scripts

The goal of this task is that the participants become aware of their behaviour and actions while engaged in a dialogue. The objective is to practise the skill of being consciously present in a dialogue and to observe one's actions.

Method 3: Giving presents

The goal of this task is that the participants begin to share their thinking from the very beginning. The purpose is to understand that sharing one's thinking is like giving a present to the other members of the group. In addition to sharing, each group member also receives these presents from the other participants.

Clarity and liveliness of dialogue

A dialogical orientation refers to the actions that make dialogue and knowledge creation non-fuzzy. It is possible to consciously learn such an orientation. This requires one to observe, reflect on, evaluate and self-regulate one's activities while engaged in a dialogue. The dialogical actions are the following:

- taking and giving a turn
- being present and concentrating
- word-for-word reception and coding, listening
- awareness of one's preconceptions and assumptions
- regulating the expression of and withholding one's preconceptions and assumptions
- staying on the other person's speech.

Take some time to familiarize yourself with the following methods and ask yourself how the dialogical action in question helps you to advance towards your goal. Listen to the dialogue scene of the web service "Deep Learning through Dialogue" that is mentioned in connection with each method, because listening deepens your understanding of the method. Improved mastery of even a single dialogical action greatly helps the progression of dialogue and contributes novel, unexpected ideas to common thinking and collaboration.

3. Research part

3.1 Survey for upper secondary school teachers and analyzing the results

In this part of our project we did research about the implementation of MSCW of teaching in Finnish upper secondary schools, by surveying the local teachers' views about it as well as students' views. The focus of this research is to understand the reason for behavior of Finnish students, who in our opinion are more responsible for their learning rather than teachers, though it has to be like that. One of the reasons for the success of the Finnish education system, as we mentioned before is the high quality of teachers. While observing and discussing with Finnish teachers we asked from them questions like 'what does 'high quality' include?' and many teachers answers were almost the same or the ideas were in the same direction. With their answers we choose the following crucial reasons and abilities of high quality teachers:

- Being creative
- Try to give students responsibility for their studying
- Teachers have to be able to use IT technologies
- Every teacher should have and make research work in their field of pedagogy
- They should be involved in creating the curricula.

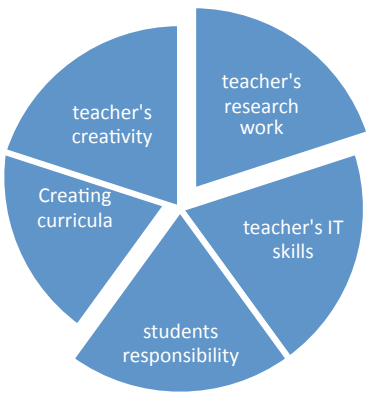


FIGURE 5. Teacher's competencies in MSCWT

Questionnaire for the teachers and answer

We asked questions about the Finnish education system in general and questions which are particularly related to the student centered way of teaching from Finnish upper school teachers. We also interviewed and worked with pedagogical experts, who are currently working at the Professional Teacher Education Unit at Häme University of Applied Sciences, and who had been working as subject teachers or student guidance in different upper secondary schools in Finland. All together in our research were engaged 8 teachers, who represented diverse subjects as mathematics, IT, English language, a manager in the field of education and pedagogical researchers.

1. What kind of pedagogical approaches and activities do you think is better to use for developing independent learning and self-direction?

Answer 1
I don't know what is better, but one way is that students can watch video clips, where teacher explains mathematic things and then the students do exercises. They can of course ask help from the teacher or the other students.

Answer 2
Very different approaches according to the learning goal , student group, environment, time of the learning (weekday, morning, evening, other circumstances like the weather)
LEARN TO KNOW YOUR STUDENTS LEARNING STYLES
Be inspired of what you are teaching to others.

Answer 3
Problem based learning, projects, real world problems and situational problem solving

Answer 4
Learner centred pedagogical models where the students have an active role and they have strong responsible of their learning. To achieve self-directed learning in the begin of the learning process. Teacher have to be more in active role (tutoring, guiding,...) but the guide students towards self-directed approach.

Answer 5
PBL and experiential learning

Answer 6
Dialogical collaborative learning makes it possible to develop in independent learning and self-direction. In dialogue like working you'll be totally engaged in a learning process, you certainly active in participation, and

you make contributions into the group's work because you feel responsibility for the outcomes of the group. In the same time, by developing your dialogical working you'll develop independent learning and self-direction. You'll take care of your peers and you don't leave them alone.

The survey results show that Finnish teachers have strong interactions between technology, pedagogy, and content knowledge bases. In fact, teachers see the value of learner centered pedagogical models and approaches such as:

- problem based learning, real world problems and situational problem solving
- dialogical collaborative learning
- project based learning
- flipped classroom.

2. How do Finnish teachers implement 'the most student-centered way' of teaching in their work?

Answer 1
Teachers do not only teach but they also always ask questions from their students and so their learning goes on. One way is that students study independently and then they teach one another. In chemistry and physics lessons they can do laboratory works and find out the theory that way.

Answer 2
Experiencing that themselves during their studies, at further education and by noticing the difference how learner act

Answer 3
Teachers are more coaches than all mighty sources of information and directions. The students and their individual learning process is in the center.

Answer 4
The base is in their thinking and thoughts about learning – if you think that the student is in an active role then you're in right direction.

Answer 5
I treat everyone as an individual with different learning approaches and needs. My classrooms and activities are versatile and also try to be interesting and supportive.

Answer 6
I think at the best they use certain pedagogical models like for example PBL, Inquiring learning, DIANA-model, and/or they'll mix elements of many models.

The respondents that answered this question said that to implement 'the most student – centered way' of teaching they use the following methods and techniques:

– asking questions from students to maintain learning process
– give opportunity to students to teach each other
– conduct laboratory works
– problem based learning
– inquiry learning
– DIANA model.

The answer is that we can NOT just use these methods, we should consider every student as an individual with different learning approaches and needs. Create positive learning environment where teacher plays "coach's" role and student active participant of learning process.

3. Which pedagogical approaches do you often use in your lesson?

Answer 1
First I teach a new topic as shortly as possible. I always ask questions when I teach if it is possible. It's good if students can figure out the new topic by using the knowledge they already have from the previous topic they learned. The rest of the lesson they usually do exercises.

Answer 2
Short lecturers or demonstrations
Practical examples and team learning
Student centered and small group centered
Educational discussions and pedagogical walk
Excursions

Answer 3
Student initiated group works, constructivism

Answer 4
Students are always in the middle and when I'm planning teaching I try to think about how students can be in active role to achieve learning goals. The learning process orientated planning is in my focus and I that of 2 points; what are the learning goals of this study module and what are my students present knowledge at the moment. Between of these 2 important points I will create an active learning process. I use active methods and try to teach as I teach (because I'm a teacher trainer).

I love to use different pedagogical approaches; sometimes DIANA model is the structure, sometimes problem based,...

Learning should always began from the authentic situations.

Answer 5
Learning by doing multimedia learning; constructivist; experiential

Answer 6
I use the DIANA model and dialogical learning methods. And of course I mix the best ideas of many approaches.

It is concluded that teachers distinguish the following basic pedagogical approaches:

– group based teaching, constructivism
– multimedia learning
– PBL, authentic learning
– experiential learning, DIANE.

In addition teachers use traditional pedagogical approaches. For example:

– short lecturers or demonstrations
– doing exercise.

4. What is the importance of the most student-centered way of teaching and learning?

Answer 1
Teacher must motivate students to do their work at school as well as their homework. They need to be responsible when it comes to schoolwork.

Answer 2
Deep learning, motivation, inspiration, practical approaches

Answer 3
Learning outcomes become visible and interesting as well as fun. Motivation increases.

Answer 4
That I as a teacher know my role and keep in my mind that students are in active learning role.

Answer 5
It allows to be interested in subject.

Answer 6
The most student-centered learning influences on the deep-oriented learning; understanding and higher-order critical thinking will develop, skills to apply the knowledge enhance, and creativity and evaluation and self-evaluation become possible and realistic.

Respondents to the questionnaires stressed that the most important reasons of using student-centered way of teaching and learning:

– to increase students responsibility for their learning
– to engage and motivate students
– to develop critical thinking.

5. What are the prerequisite skills and knowledge teachers have to have in order to implement and use the most student-centered way of teaching and learning?

Answer 1
Teachers need to trust that their students will do all the work they are supposed to and they learn without the teacher telling them all. Teachers have to know different student centered methods.

Answer 2
Time to plan and evaluate together with students how and what they have learned. To teach same group long enough to get to know them and they learn to know you. To have a good space to teach and good student group size for different situations.

Answer 3
a) Self-knowledge of one's personality – be your own person and use the best of your personality.
b) Teacher's professionalism – skills in pedagogy
c) Tutoring and guidance skills

Theories of Learning Styles

Answer 4
Theories

Answer 5
Give them a choice.

Answer 6
From my point of view, the most student-centered learning will be true by developing dialogical learning, knowledge and skills. For example without dialogical competence there are many shortcomings in the peer interaction, which weakens learning, understanding, applying of the knowledge, evaluation and creation. Learning outcomes and results will not be the best.

According to the answers of the respondents one of the necessary conditions, from teacher's view, is to build trust of student's abilities. Moreover, teacher should use different methods, which leads to the positive learning environment. In this learning environment teacher' role is – facilitator, consulter, and tutor. The activities to develop communication skills play an important role in the learning process. For this purpose DIALE method is very effective.

6. One of the reasons for the Finnish success in education is considered to be the high quality of Finnish teachers. What are these key features or qualities of Finnish teachers that are the most important?

Answer 1
We do cooperation a lot. If someone tries some new method and it works, they let the other teachers know about it, too.

Answer 2
Appreciation of teacher profession

Answer 3
Good teacher education
Well paid job
Pedagogical freedom and free working hours

Answer 4
Teacher are motivated and appreciated. They also possess a very high Pedagogical freedom and independency, we are trusted as a teachers, good teacher training and education + continuing education, support of the working community; we share and care of each other's and collaborative working atmosphere level of education and skills in teaching.

Answer 5
Tough question as I think the key is everyone is an individual and this is a success in itself: teachers are responsible for their own implementation methods and pedagogical approach, this means that a certain amount of self-reflection needs to have been done on learning in general. We do not all follow one method or approach.

Answer 6
Finnish teachers are good educated, they try to be equal with students, they try to courage and support every student and give the possibility to develop to the top. Finnish teachers are not so critical in a false way, and they try to trust on every student's development. They try to help and scaffold in many kinds of learning problems and also other problems. Finnish teachers do not like to put students in different levels, they like to keep the development possibilities open.

By asking this question we intended to find out the qualities and descriptions of Finnish teachers, whose contributions are considered as one of the main reasons to have success in the field of education. Only teachers know better than others in which direction they should pay attention to be a modern teacher. The reasons for being high quality, according to these teachers, include cooperation between teachers, sharing ideas and working in a collaborative atmosphere. If someone tries some new method and it works, they let the other teachers know about it, too. Teachers have enough pedagogical freedom and independency to implement diversity of pedagogical approaches; they do not only follow one method or approach, on the contrary, teachers try to find out an individual learning path and direction for each student. Because of good teacher education, they are trusted and motivated to educate themselves through continuing education.

7. Why do you think Finnish students become self-directed earlier?

Answer 1
Teachers trust the students. Teachers give large-scale homework that the students really need to put effort to. Sometimes the students have been given lots of homework in many different subjects and they really need to figure out how to manage their time and how to have all of the homework done when it needs to be.

Answer 2
Long process of democracy
Equality between genders
Good early childhood education with well-educated teachers and social workers

Answer 3
Young people are trusted from the start and made to believe that they are responsible for their own learning.

Answer 4
I think that in our kindergarten they start this pedagogical supporting.

Answer 5
This again is a tough one as I have a lot of students who at the ages of 18–60 still find self-direction difficult. But many can handle it, is it again that we are not all put into one model but need to find own learning paths and direction based on what is presented in the classrooms: do kids develop individual freedom and self-awareness at an earlier age due to the high regard for individuality in this country? Quite often a 'safe', nurturing environment allows the development of self-more. Teachers give them more freedom.

Answer 6
It's difficult to answer to the question, but perhaps because of the reasons mentioned above. And then it is typical in Finland to support children's early autonomy, to emphasize to do homework self-directed, to give freedom to grow up, in an individual way, and to take developmental steps of everyone's own.

The intent of this question was to understand the reason why Finnish upper secondary school students look more self-directed. In our opinion these students compared to Kazakhstan students of the same age are more self-directed and behave well. In fact it was quite a difficult question for them; however, we gained some thoughts and probably the reasons for being self-directed. Young people are trusted from the start and made to believe that they are responsible for their own learning. From kindergarten children obtain pedagogical support by well-educated teachers and social workers. It is typical in Finland to support children's early autonomy, to emphasize doing homework in a self-directed manner, to give freedom, to grow up, in an individual way, and to take developmental steps of everyone's own. While reading the teachers' answers, we noticed that the words "trust" and "more freedom" were repeated often. They try to be equal with students, try to encourage and support every student and give the possibility to develop to the top. Finnish teachers are not so critical in a false way, and they try to trust every student's development. One of the main reasons is to foster them to manage their time and learn how to have all of the homework done when it needs to be. Apart from these, there were other reasons mentioned such as long process of democracy and equality and equity between genders.

8. What kind of pedagogical approaches help Finnish students to achieve a high level of knowledge?

Answer 1
Teacher motivates the students to do their best. I personally always try to find something good so that I can say to the student "you are good" or "you did well".

Answer 2
Trust between student and teachers (own goals and own choices)
School starts at the age of 7, before that free preschool and playschool
Good quality of educators and general laws and legislations
School is obligatory for all, right to get education
Comprehensive school and long time to play before 'real' education (increasing creativity to learn new things)

Answer 3
High motivation, self-directed learning process with a lot of guidance and help

Answer 4
Student centeredness approach, of course

Answer 5
Student oriented lessons an collaborative learning mixture of all approaches – from behaviorist to PBL and putting theory into practice

Answer 6
The same reasons as above, those pedagogical models and general pedagogical approach, which I talked about above. They try to help and scaffold in many kinds of learning problems and also other problems. Finnish teachers do not like to put students in different levels; they like to keep the development possibilities open.

According to the responders the pedagogical approaches which are most useful to achieve goals and develop knowledge are those which motivate the students to do their best. Teachers also noticed that student centered approaches such as collaborative learning, PBL, integrative learning (theory and practice) help a lot. They emphasized the importance of scaffolding as well as the process of encouraging students orally, for example, by saying to the students "you are good" or "you did well" and create trust between student and teacher. Of course there is no better pedagogical method or approach that is the best; good teachers use a mixture of all approaches from behaviorist to PBL and put theory into practice, they are eclectic. All the ways of teaching should increase creativity to learn new things and give high motivation. While choosing a method the teacher needs to pay attention to developing self-directedness in the learning process, with a lot of

guidance and help. Finnish teachers do not like to put students at different levels; they like to keep the development possibilities open.

9. To which extent do you use PBL, collaborative learning, and the other most student centered way of teaching in your lessons? Please choose the number between 1 and 10 for each pedagogical approach that you use.

Answer 1
PBL 1, collaborative learning 3 (sometimes in chemistry lessons, in mathematics lessons students can calculate together)

Answer 2
PBL 4, collaborative learning 8, freedom to choose some voluntary contents (paper, teamwork) 10, student counseling in small groups 8, small group discussions 8, creativity choosing the best way to show students learning 10

Answer 3
PBL 10, collaborative learning 10

Answer 4
Collaborative learning 10, PBL 5, Case learning 5, DIANA 8

Answer 5
PBL 9; collaborative 10; experiential 9

Answer 6
I use the DIANA model and dialogical learning, dialogical methods and many variations of different learner-centered methods, number = 9.

From the given answers we deduced that teachers use PBL at different levels, but the average score was 6.3; the use of activities of collaborative learning on average was 8.3. Senior teachers mentioned using methods such as: student counseling in small groups 8, small group discussions 8, creativity choosing the best way to show students learning 10, case learning 5, DIANA model and dialogical learning 8, experiential 9 and variations of different learner-centered methods.

10. Do you feel yourself more facilitator or traditional teacher?

Answer 1
I think I'm rather traditional teacher. I have sometimes tried something new, for example students studying independently or in groups and then they teach one another. The students didn't like it. They said that not everyone could teach the topic, because they didn't understand it.

This year it's new for me to put my notes and solutions to One Drive, so that students can watch them from there, for example, if they are sick. Another new thing is paper, where students mark the exercises they have done.

Answer 2
Facilitator or sociocultural animator (social pedagogue)

Answer 3
Absolutely enabler and facilitator, a coach

Answer 4
Facilitator of learning

Answer 5
I feel more a facilitator.

Answer 6
I feel myself more facilitator. However, I emphasize that it means also teaching in critical and difficult learning points and situations.

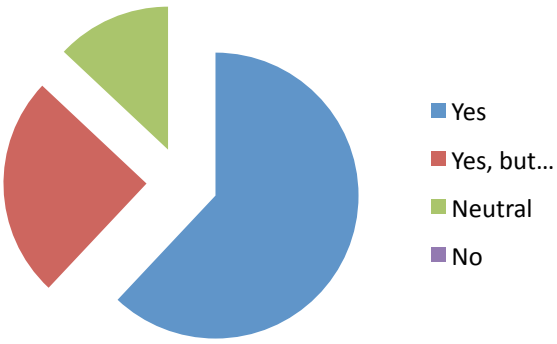
Five out of six teachers answered that they feel themselves as facilitators of the learning process and in addition there were words used such as a sociocultural animator (social pedagogue), absolute enabler and a coach. They emphasized that it means also teaching in critical and difficult learning points and situations. Only one teacher thought that she is rather a traditional teacher than facilitator, although she tried to be as a facilitator, but her students do not like it and they preferred the traditional way, it is not always easy to work in group and she felt compelled to continue teaching in the traditional way (math teacher).

3.2 Survey for upper secondary school students and analyzing the results

While studying here in Finland we have met many students and asked these questions. Because our project was related to the student centered way of teaching we considered that students had to be in the center of our attention. One very important matter that we should emphasize is that local students' answers were honest, without teachers' influences. In the questionnaire, 25 students were interviewed, 15 of them were students of upper secondary school who we had been observing, seven students we met while teaching and working in a mathematics workshop at Häme University of Applied Sciences. They were 1st year students starting a bachelor's degree programme and had finished local upper secondary school. The rest of these students we met in different schools and circumstances. Questions in the survey were mainly focused on the implementation of the student centered way of teaching by Finnish teachers. There were 11 questions, some of them open questions and others closed questions with the opportunity to answer widely.

1. Do you have enough freedom to study those topics that interest you?

Most students (65 %) answered that they have enough freedom to study what they wanted and were interested in, also they already had a plan for their future profession and the school provided enough courses from which to choose. About 25 % of the students agreed that they also have an opportunity to study topics that they are interested in, but according to them it is not always possible due to the number of compulsory courses that they should cover and which take a lot of time. There I would like to emphasize that if student had chosen to learn in science class they have had a few privileges regarding the compulsory courses.



2. One of the reasons of Finnish education success, by according to researchers is the high quality of Finnish teachers. Tell us about your teacher's quality? What good elements and what bad elements of your teachers' behavior you can highlight?

It was an open question. We gave the students an opportunity to highlight the main features of their teachers. All students are satisfied with the professionalism of their teachers and said that their teachers are highly qualified. Their words about their teachers were: 'They really know what they are doing', 'my teachers are well-trained', 'our teachers are highly educated', 'they teach well and they really have no bad elements'. In general the student's opinions about the quality is very good. But we noticed that a few students wrote about the differences between the –"newbies" and the "senior teachers". According to them "newbies" try to use more IT technologies in the study process compared to "senior teachers". Students like using IT technologies in lessons, 'but not all teachers can use them, they could be a little bit better in technologies'. There were answers like 'We suppose so. We trust that the school wouldn't hire any incapable teachers', which emphasizes the fact that getting a teacher's job is not easy, there are tough interviews to get a position, so to be competitive teachers have to have high quality. This fact, always remind teachers to work on developing them-

selves as a competitive teacher and appreciate their profession. They speak a lot with the students and do not treat them just as a group of random people. But on the other hand they do not really give personal feedback.

– Overall teaching performance is good, although rarely it is not so good.

3. Your teachers' attitude looks more as facilitator or as traditional teacher? Why do you think so?

It was an open question, and the following is a summary of the answer: Some are facilitators but others are traditional. It really depends on the teacher, but even most of the traditional teachers are trying to be more modern even though they like to use the classic methods. This is due to the age gap between the teachers. And we suppose they also do not want us to learn in just one way. They want to slowly get used to using the media too. We like the way teachers teach.

4. Have you ever given feedback for the lesson to your teacher?

We, teachers, know that good feedback is important for the students motivation to learn. The same reaction it gives for the teachers work to receive feedback from the students. Almost all students (85%) answered that they have given feedback about lessons. Also they said that it often occurs that teachers ask and collect feedback about the lesson or course material from the students. Students understand that honest feedback is important in order to improve teachers' work. This is the answer of one student 'At the end of each course many teachers ask you to give some feedback, so they could improve their teaching and always be better. But you can also give feedback at the end of the lesson if you feel like it. It's not considered rude if you want to guide your teacher.'

5. How often do you help to your teacher to plan a lesson?

We asked this question to find out how deep upper secondary school students may influence their teachers' work of planning the lesson. The results say that students never or very rarely have contributed to the planning process. However, on the comments to this question there were answers like: They might ask our opinion on the course plan in the beginning of the course. Like "do you want to go through this chapter first of after the other?"

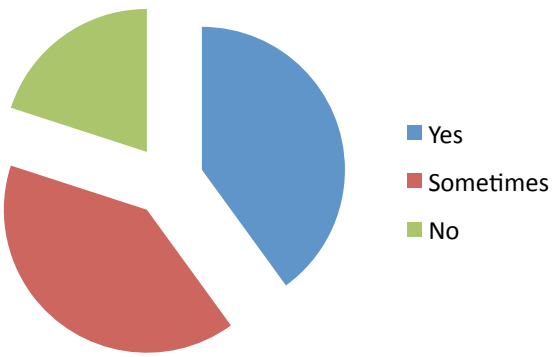
6. Describe your typical math lesson and how well did this kind of studying suits to you?

Because we are math teachers, we have been interested in the way of leading the math lesson by Finnish teachers, even though we observed many lessons. The results were almost similar with the way that we think in Kazakhstan upper secondary schools math lessons. Students describe the typical math lesson as the following: "First, we check the homework, after that we can ask any questions we have. Then we move onto the new topic, listen to the theory and then do lots of exercises by ourselves." All of them are satisfied with this kind of math lesson. There are a couple of student's answers: 'It's quite good. We can think ourselves and not just sit there and stare at the blackboard' and 'It's ok, it's better than just listening to the teacher and copying the exercises from the board'.

7. How often do you work in a group in lessons?

– In math, not really. But in other subjects it's quite common.
– In subjects like history and biology we work more in groups than in math for example.
– I do exercises with my friend and especially then when I don't understand by myself.
– We can almost always work in pairs.
– Seldom, but we help each other

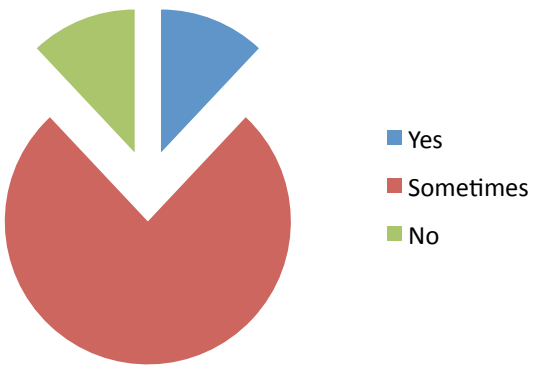
8. Did you receive support from your group in your studies?



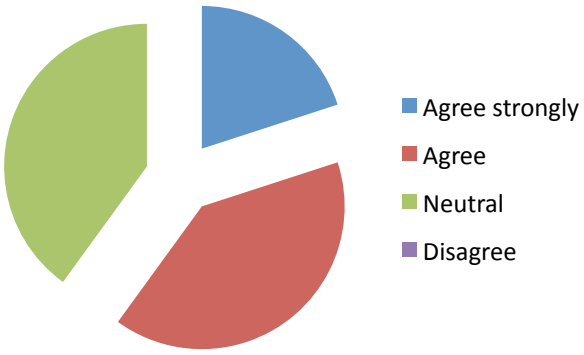
9. Do you find it difficult to give feed back to your classmates?

All the students answered that they have been giving feedback to their peers, it is normal and inevitable when students work in groups, and is a part of the study process.

10. Do you feel your opinion has importance?



11. Do you feel yourself as in the center of studying process?



3.3 Comparing MSCW of teaching in Finland and US

While researching and working with our project we luckily met one student from the USA who had been studying here in Finland, at upper secondary school for 1 academic year. She came here on a student exchange program, which is common in Finnish schools. We wanted to find out her opinions regarding the Finnish school compared to her school in the USA, because we think that it is important and interesting to know the point of view of a student from abroad, who has an experience studying in different education systems. All the questions were the same as we asked from local students, except that we asked her to compare the USA and Finland upper secondary schools system. While interviewing her we noticed many similarities between USA and Kazakhstani upper secondary school system and how they are working, the attitude to the teacher, workload of students and subject teachers.

Questionnaire for the US student

1. Do you have enough freedom to study those topics that interest you?

In Finland I have more of a choice. I have to take some classes where I will learn something like math. But because I'm an exchange student my schedule is much more flexible. In the United States I really don't have much of a choice. You are required to take some classes which we call "core classes". The core classes are math, social studies, science and English. Then on top of that we have to take elective classes. There are classes like art and physical education.

2. One of the reasons for Finnish education success, according to researchers, is the high quality of Finnish teachers. Tell us about your teacher's quality? What good elements and not so good elements of your teachers' behavior you can highlight?

In Finland when you see a teacher out of school you don't mind seeing them. In the USA if you see a teacher out of school you try to find a way where you don't have to talk with them. But it all depends on the teacher. In the United States sometimes I feel like the only reason teachers are there is because they have to be. It is really rare to find a teacher that is an amazing teacher. Most are just men. The amazing teachers really work with the students and try to make each lesson interesting. They let all good vibe. The other ones just gave you worth. What we like to call "bray work". Something that is pointless and won't help me in any way. I don't like teachers that are super strict or what is done. Every student is different so worth will be done in a different way.

3. Your teachers' attitude looks more as facilitator or as traditional teacher? Why do you think so?

I prefer a teacher who brings a good vibe. Someone who loves what they are doing. One who interests with the kids in class. So one with a happy attitude. It just makes the classroom a better place and the students are more willing to learn.

4. Have you ever given feedback for the lesson to your teacher?

No. Not really. Teachers don't ask so the students don't say anything to the teacher. Every once in a while a teacher will give a survey asking a few questions but it is more of a self-assessment.

5. Describe your typical math lesson and how well did this kind of studying suits to you?

In the USA a typical math lesson is you go into class, you check your homework and get a lesson. Then if there is extra time you start next assignment. We have teals and quizzes a lot. In Finland the process is about the same.

Except, less homework is given. And the information given is presented in a different way. Plus math here we just have one big test.

6. How often do you work in a group in lessons?

In Finland I usual work with someone out of choice but it is not required. Here I'm not forced into group work. Maybe for English here we will give each other but papers you write by yourself. But in Chemistry I always have a partner. In the US sometimes you are forced to work in groups to do a project. Like in English class I might have to do a book report with someone. But that all depends on the teacher.

7. Have you receive support from your group in your studies?

Well enough. I get a lot of support from my parents. In the USA the teachers never really cared. Maybe before the end of the semester they would pull you aside to tell your grade and what you could do but that doesn't happen. Sometimes classmates would help. But that is only usual when they know you. In Finland I'm an exchange student but some teachers will talk to me about how I'm going to be graded. Others just go easy on me and grade me all of I have done. I have classmates here just like to get what they need to get done so I guess we all have the same idea in mind. In a way we support each other but in different way.

8. Do you feel your opinion has importance?

In the USA no. The school based all of attendance go you just got to show up. I really prefer the Finnish school System over the USA. If you talk to someone there most people don't like it. In Finland I really haven't needed to say an opinion.

9. Do you feel yourself as in the center of the studying process?

In the USA no. A lot of work I'm given is just to keep me busy. I would prefer a system that helps me become what I want to be in the future. Here the problem is the language barer. Teachers pay attention to me but in a different way than a normal student.

10. What features of Finnish school differ from USA schools?

The system between Finland and US are very different. How the grading must be taken are different. In The US I have the same day everyday: going to the same class at the same time. In Finland my day changes every day and my schedule changes every few weeks. In Finland we have much more independence and the breaks are longer. In the US there are a lot more kids in the school and classes and the breaks we need is to get from one class to the other. In Finland we get a free lunch every day. To get the school during class time in the USA you need to pass card and the security guards will check it. To leave school earlier you have to be signed out by a guardian.

Analysis of data which were taken from a 10th grade exchange student from USA who is studying now in Finland:

She noted that in Finland she has more freedom in choosing courses. Regarding teachers attitude she highlighted the low motivation of teachers compared to teachers with enthusiasm. As a student she prefers teachers who can provoke interest in the subject. Teachers in USA use more written feedback. While students need in addition other ways of assessing. Concerning typical math lesson she noted that it is in general the same, except less homework is given. Compared to US schools, Finnish school teachers use different ways of presenting the same information and no tests. She felt more teachers' attention, support in Finland. From her point of view daily school life is very different in two educational systems. She claimed that she prefers the Finnish school system to USA.

4. Practical part

4.1 Conducting workshop about collaborative learning

In order to share our understanding about collaborative learning we decided to conduct a workshop for our colleagues. Knowing the importance and the effect of using this pedagogical approach of collaborative learning, it lead us to the idea to teach and familiarize it to our colleagues, teachers of different subjects, who came from Kazakhstan. The workshop itself was lead in a student centered way, that is to say, our colleagues worked in collaborative groups of 4 teachers. After shortly introducing the main theoretical materials about this approach, teachers thought about different pedagogical situations, where they can use it, when this kind of learning can be useful. They filled the table about pros and cons of using collaborative learning. We recorded the process of this workshop and put it onto the Internet, so if you are interested you can watch it on YouTube: https://www.youtube.com/watch?v=mhYDSnQayuE

4.2 Conducting workshop about PBL

After conducting the workshop about collaborative learning and seeing the results, we decided to lead another workshop. Although Problem Based Learning (PBL) exists as a pedagogical approach for quite a long time in the field of education, in our opinion, Kazakhstan school teachers rarely use it. We gave a little theoretical material about this pedagogical tool such as the history of PBL. Then we asked our colleagues, working in small groups, to present ideas and knowledge about using PBL in their work. While learning and working on it, we created a problem connected with real life and a mathematical topic about the area. Students tried to solve this problem and explained their ideas and told each other features such as, what was the difficulty and the ways of avoiding some misunderstandings and confusion.

We recorded the process of this workshop and put it on the Internet, so if you are interested you can find it and watch from YouTube: https://www.youtube.com/watch?v=XQhzDRAc9lk

4.3 Making a worksheet for upper secondary school teachers, which consists of activities for MSCW of teaching

For the duration time of our research about the student centered way of teaching we thought about the activities which can be useful for maintaining this kind of teaching. We came up with the idea of making a useful worksheet of activities that our tutors and local school teachers could use in their teaching processes. Our pamphlet consisted of about 10 different activities which can be used for different learning situations. Although, we decided to create it specifically for mathematics lessons, as we are math teachers, we hope that other subject teachers can easily adopt it for their needs. In order to implement it accurately and understandably, every learning activity is written with step by step instructions. The electronic version of this pamphlet you can find in Appendix 3.

4.4 Creating the web site which consists of all the materials

As we are living in a technological era, we decided to put all this material on the Internet, so every person interested in this work can have access to it. This is also a convenient way of sharing our understanding and research results with our colleagues. While studying here, in Finland we had been taught to create a Google site, so we decided to create it on the Google platform. Also in this educational site you can find other work by our colleagues about the Finnish education system or another. To have a look to this site follow to the next web address: https://sites.google.com/site/finnishexperience/

Developing Dialogical Learning Skills

Conclusion

The reasons for choosing this topic for our work has been to research Finnish pedagogical approaches in upper secondary schools and the importance of the teaching in the most student centered way. We have decided that we need to pay attention to the three of them: Collaborative learning, Problem based learning, Dialogical method.

One of the main influences of Finnish success in education field, have been the high quality of teachers, who can maintain the implementation of the most student centered way of teaching. According to this research, this style of teaching, or, we even dare say that being a facilitator, gives for the students more freedom to educate themselves. It helps students to study those topics, in which they are interested in and as a result motivates them to learn more deeply.

The use of modern IT tools, multimedia and other educational equipment in the learning process takes an important place. Learning and working collaboratively gives a good opportunity for sharing and tightening knowledge together and giving feedback which is vital in the learning process. The versatile support from classmates and from a teacher helps a lot. When students feel the importance of their opinion, they become productive learner and put themselves at the center of the studying process.

All of these lead teachers to teach in student centered way. Trust for the teachers work is another important feature of Finnish success. As we saw in comparison the teaching in Finland school and USA schools, students who have more freedom learn better than students who are taught by the teacher in a centered way of teaching.

The next type of pedagogical approaches and activities, according to Finnish teachers, are better to use for developing independent learning and self-direction with strong interactions between technology, pedagogy, and content knowledge. In fact, teachers see the value of learner centered pedagogical models and approaches such as: problem based learning, group based teaching, situational problem solving, dialogical and collaborative learning, project based learning, flipped classroom. Also to implement 'the most student centered way' of teaching they, the Finnish teachers, use the methods and techniques: asking questions from students to maintain learning process (Socratic questions), gives students the opportunity to teach each other and conduct laboratory work.

Of course, it is impossible to get good results by using only some methods; we should consider every student as an individual with different learning approaches and needs. One should create a positive learning environment where the teacher plays the role of coach making the student an active participant in the learning process. By using the most student centered way of teaching and learning, teachers can increase students' responsibility for

their learning, to increase their motivation, as well as, to develop critical thinking. In order to implement and use the most student centered way of teaching a teacher should build trust concerning the students' abilities and create a positive learning environment. Communication skills play an important role in the learning process. For this purpose the DIALE method is very effective. Reasons for being high quality, according to these teachers, include cooperation between teachers, sharing ideas and working in a collaborative atmosphere. If someone tries some new method and it works, they let the other teachers know about it. Teachers have enough pedagogical freedom and independency to implement diversity of pedagogical approaches; they do not follow only one method or approach, on the contrary, teachers try to find out the individual learning path and direction for each student. Because of good teacher education, they are trusted and motivated to educate themselves by continuing education. We understand that one of the pedagogical successes of Finnish teachers is maintaining student centered learning and due to this we conducted workshop about collaborative learning and workshop about PBL for our colleagues. Also we create a worksheet for upper secondary school teachers, which comprised activities for MSCW of teaching.

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APPENDIX 1

QUESTIONNAIRE FOR THE TEACHERS

1. What kind of pedagogical approaches and activities do you think is better to use for developing independent learning and self-direction?
2. How do Finnish teachers implement 'the most student-centered way' of teaching in their work?
3. Which pedagogical approaches do you often use in your lesson?
4. What is the importance of the most student-centered way of teaching and learning?
5. What are the prerequisite skills and knowledge teachers have to have in order to implement and use the most student-centered way of teaching and learning?
6. One of the reasons for the Finnish success in education is considered to be the high quality of Finnish teachers. What are these key features or qualities of Finnish teachers that are the most important?
7. Why do you think Finnish students become self-directed earlier?
8. What kind of pedagogical approaches help Finnish students to achieve a high level of knowledge?
9. To which extent do you use PBL, collaborative learning, and the other most student centered way of teaching in your lessons? Please choose the number between 1 and 10 for each pedagogical approach that you use.
10. Do you feel yourself more facilitator or traditional teacher?

APPENDIX 2

QUESTIONNAIRE FOR THE STUDENTS

1. *Do you have enough freedom to study those topics that interest you?*
   Yes Strongly Yes, but... Neutral No

   Comments _____

2. *One of the reasons for Finnish education success, according to researchers, is the high quality of Finnish teachers. Tell us about your teacher's quality? What good elements and not so good elements of your teachers' behavior you can highlight?*

   _____

3. *Your teachers' attitude looks more as facilitator or as traditional teacher? Why do you think so?*

   _____

4. *Have you ever given feedback for the lesson to your teacher?*
   Quite often Often Rarely Never

   Comments _____

5. *How often do you help your teacher to plan a lesson?*
   Always Often Rarely Never

   Comments _____

6. *Describe your typical math lesson and how well did this kind of studying suits to you?*

   _____

7. *How often do you work in a group in lessons?*
   Often Rarely

   Comments _____

8. *Did you receive support from your group in your studies?*
   Yes Sometimes No

   Comments _____

9. *Do you find it difficult to give feedback to your classmates?*
Yes Sometimes No

Comments _____

10. *Do you feel your opinion has importance?*
Yes Neutral, depends on a teacher No

Comments _____

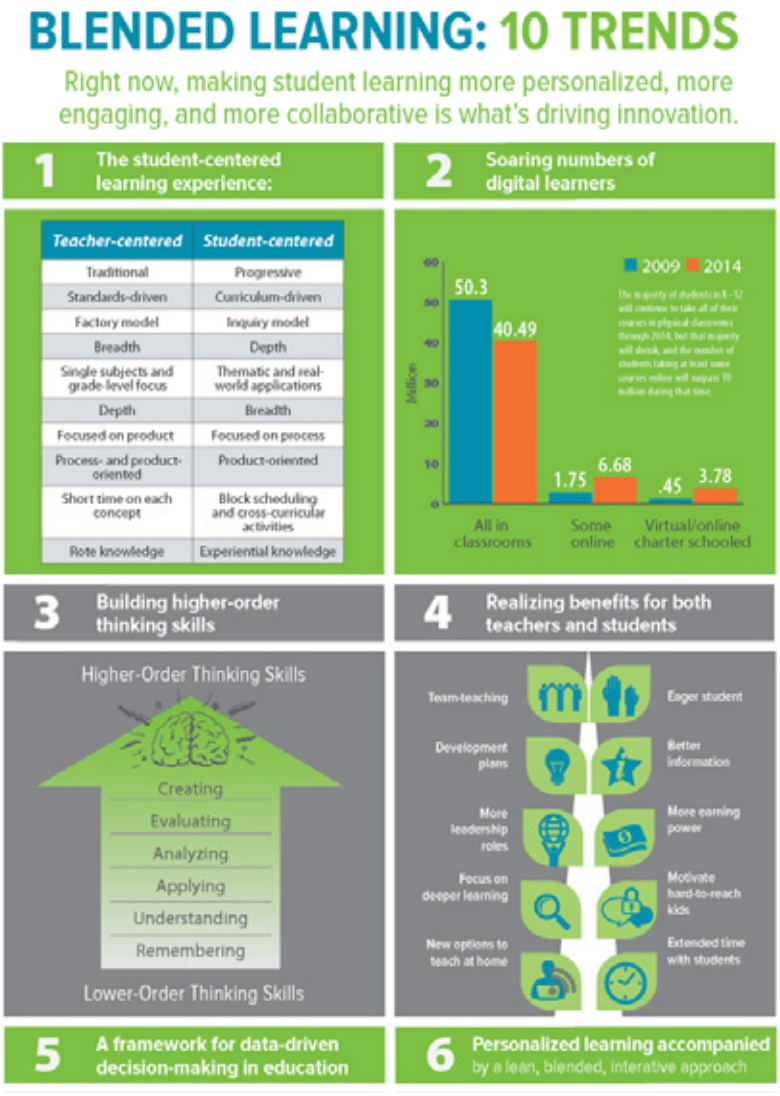
11. *Do you feel yourself as in the center of the studying process?*
Agree Strongly Agree Neutral Disagree

Comments _____

Implementing feedback systems

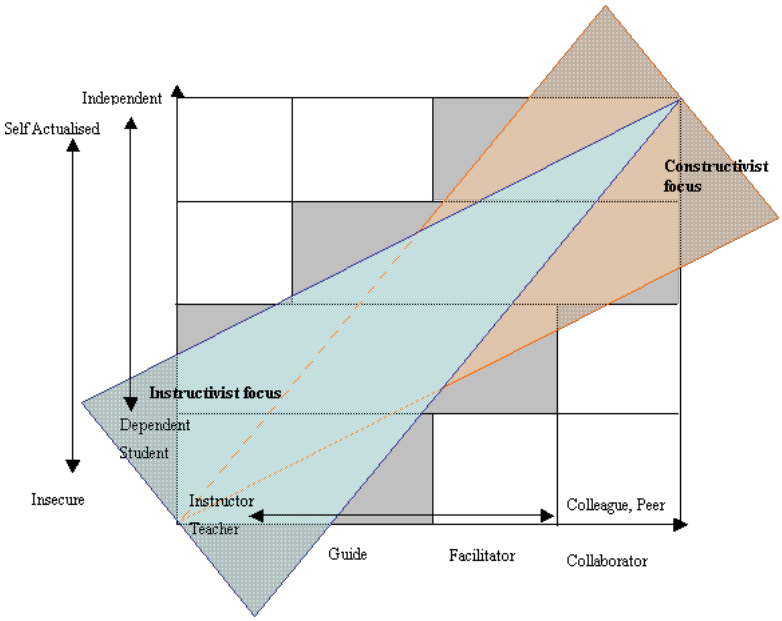
APPENDIX 3

IMPORTANCE OF MSCWT



APPENDIX 4

TEACHER'S AND STUDENT'S ROLES IN MOST STUDENT CENTERED CLASSROOM



ASSESSMENT TYPES OF FINNISH AND NAZARBAYEV INTELLECTUAL SCHOOLS: COMPARATIVE ANALYSIS

Zhanar Zhaxybayeva, Brian Joyce, Maaret Viskari

Contributions by authors: Zhanar Zhaxybayeva has designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

This comparative article highlights interesting differences between teacher-centered and student-centered education in the context of assessment. It is worth noting that the author is employed by Nazarbayev Intellectual Schools, which as the name suggests, has the very best students in Kazakhstan who are gifted in the sciences. This has a direct effect on the author's methods of criteria and assessment within its unique environment.

The topic researched by the author seems to be very demanding in terms of how she can influence the outcome according to her recommendations and findings. She conducted intensive field studies in Finnish education system, in particular primary and upper secondary schools.

This comparative article discusses the student assessment process in Finland and Kazakhstan.

Contributions by authors: Zhanar Zhaxybayeva has designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Introduction

Assessment is an irreplaceable and integral part of learning and teaching processes. Well-designed assessment offers a great amount of possibilities for students not only by measuring their achievements but also by being a means of engaging students with their learning. The teacher's aim must be supporting active learning by assessment and evaluation rather than assessment of learning because the assessment process is an integral part of students' education.

Finnish assessment

In Finland all compulsory and most specialization courses as well as the subjects of comprehensive and upper-secondary schools are assessed numerically. The scale of grades is 4–10. Grade 5 indicates adequate, 6 moderate, 7 satisfactory, 8 good, 9 very good and 10 excellent knowledge and skills. Grade 4 indicates fail. (Upper Secondary Schools Decree, 810/1998, Section 6(2)). Moreover there are some specialization and applied courses which can be assessed by marks like passed (S mark) and failed (H mark). The names of these courses are determined by the curriculum. This fact is a reminder of higher educational assessment which took place in Kazakhstan before we accepted credit-based assessment technology. At schools we have never had pass and fail marks only numerical ones.

In Finnish schools assessment is divided into two types which perform various roles: assessment during the course of studies and final assessment (National core curriculum for basic education, 2004, p. 260). The first type of assessment in Nazarbayev Intellectual Schools (NIS) teachers call formative assessment and the latter one as summative assessment. Tasks of formative assessment are to guide and encourage studying and to depict how well the pupil has met the objectives established for growth and learning, to help the pupil form a realistic image of his or her learning and development. (National core curriculum for basic education, 2004, p. 260) It means that formative assessment should evaluate a student's competences, behavior, work skills (planning, regulating, implementation, assessing own work, cooperation with others) and progress compared to objectives of study. One of the basic principles of assessment here is self-assessment: a teacher must teach a student to be able to assess his/her own skills, knowledge and to be ready for self-development. The same formative assessment is used at NIS.

One teacher mentioned in an interview that comprehensive schools in Finland try to avoid stressing their students as much as possible. It can be proven by the fact that there are no marks till the fourth grade of primary school. Students and parents receive teacher's feedback, verbal and written formative assessment. Students study without the intention of getting a better mark, without competition in grading. Moreover there is no examination till the sixth or ninth grade when students have to take national final examination on core subjects. It must be nationally comparable and treat the students equally. (National core curriculum for basic education, 2004, p. 264)

At upper-secondary school a course is assessed by its completion. This summative assessment is called final exam. During my lesson observation a teacher explained to her students the structure of the final exam of the English language course. She said that it consisted of writing a composition, doing listening tasks and writing a final test on vocabulary, grammar

and reading comprehension. During our interview the teacher said that the final grade comprises not only examination results but also students' participation, quality of their work, doing homework, independent and extra work. The teacher had her own paper-based register where she always took notes on the above mentioned types of work and participation. Then guided by these notes she added to or subtracted 1 grade from the grade of final examination to get the final grade of the course. This method of final assessment is similar to the same at NIS where 40 % of final grade depends on student's degree of participation and work during the course, i.e. formative assessment.

Assessment in Nazarbayev Intellectual Schools

The author works at Nazarbayev Intellectual Schools (NIS). It is an autonomous organization of education which includes 15 schools and some branch organizations all over the Republic of Kazakhstan. The schools of this organization are experimental sites where the world's best, leading educational programs, methods are used having been adapted to local cases. In this way there are new, up-to-date educational tools, principles and approaches. One of them is criterion based assessment which is used in all the schools except some new ones.

Criterion based assessment is the process based on the comparison of students' educational achievements with defined, collectively developed, previously known to all the participators of the learning process. The criteria correspond to educational objectives and content encouraging students' learning and cognitive competences. (Концепция внедрения системы критериального оценивания..., 2012. p. 3)

Members of the learning process enjoy its advantages over the norm-based assessment. According to criterion based assessment, a student's work is assessed, not his/her individuality; the work is assessed with the help of criteria which are known in advance for every member of the learning process; students are assessed only on those themes which they have learnt according to the syllabus; criteria express learning objectives; students know the algorithm of assessment and they can do self-assessment; student's motivation to study and self-assessment increases. (Концепция внедрения системы критериального оценивания..., 2012. p. 7)

Criterion based assessment includes formative and summative assessments. Formative assessment functions like feedback but has an influence on the final grade for a term. Students are assessed according to 1–5 points system where point "2" indicates bad, "3" is for satisfactory, "4" is for good and "5" is for an excellent mark. According to the integrated model of criterion based assessment a teacher puts the number of objectives which a student has achieved or not achieved. These numbers are taken into con-

sideration by electronic register at defining the term grade automatically. Summative assessment is conducted at the end of a term, a half-year and an academic year. This type of assessment can be conducted during some days depending on its parts: written, oral, listening. It means that the form of summative assessment of NIS is extremely similar to those of Finland.

For the purpose of objectiveness and openness, a moderation process and student's portfolio are implemented. The moderation process is held for summative assessment work of a student which has been checked by a subject teacher. This work is reassessed by another subject teacher with the same criteria and as a result the mark of the work can be either increased or decreased. As I have investigated, Finnish schools do not have a moderation process, maybe because they trust their teachers and suppose them to be professionals. At NIS the results of formative and summative assessments are fixed in electronic register, paper-based class register and student's diary. (Правила проведения критериального оценивания..., p. 4). Reporting students' grades into three places is time consuming. Finns have the electronic Wilma register which substitutes all these three places and can be observed by other teachers, administration, parents, students, municipalities with the help of password. Here it is used very actively to get any information about student's learning, behavior, courses, extra work, etc. In Kazakhstan we should promote our electronic register, site of school to parents and get rid of the paper based register.

Besides these types of assessment there is an intermediate attestation of students finishing grades 7, 8, 11 at NIS. The aim of this work is defining the factual level of students' knowledge and skills on some subjects. Every grade takes tests only on two subjects. The examinations on these subjects are conducted in different days. (Правила проведения критериального оценивания... p. 7). This assessment type influences students' final grade which also consists of terms grades, half-year grades and a year grade.

According to students' final grades it is decided whether they should progress to the next grade or be expelled. It is strict because NIS is the school for talented and gifted students where the students with low learning achievement results cannot study. The learning programs and school requirements are higher here than in common schools. On the other hand goal-oriented, talented and gifted students can enjoy a lot of benefits here such as advanced level of study, better level of learning the languages, an opportunity to enter any international university, possibility to participate in international competitions and Olympiads.

The students of grades 9 and 12 have to take a final attestation examination. It is conducted at the end of the school year. Subjects and forms of examinations are announced by the chairperson of the Board every spring. The marks of the final attestation examination influence student's final grade which also consists of term grades, half-year grades and a year grade.

Guidance workshop

Final attestation examination tasks are organized in a form of different kinds of tests and written tasks such as essays. An examination of one subject can take more than one day depending on its parts. The amount of time given for one examination depends on the task. One grade takes only one examination a day, and the next examination takes place at least in two days. Students' papers are checked by the Board members in the building of the same school. Then the same papers are checked and approved or disapproved by the Attestation Board in Astana. NIS final examination has some similarities with Matriculation examination.

Those NIS students who continue their education in Kazakhstan can enter any university with their final attestation examination results transferred into UNT results. However if they want to be accepted into international universities abroad they have to take international examinations such as SAT, SET, IELTS, or Global Perspectives. NIS students are prepared to take these kinds of tests.

Comparative Discussion

NIS constantly needs to improve the system of assessment by creating something new in this field, by investigating foreign practice, by adapting productive and effective methods, approaches and other experiences of other countries. Here I would like to suggest some ideas which have opportunities to be implemented at NIS schools. Firstly, it concerns the Finnish matriculation examination. I thought it would be more objective and effective to adapt it instead of UNT and make some changes into final attestation examination of NIS:

1. Finnish students can take an examination on more than 4 compulsory subjects if they want. Most of them take 5–6 subjects, but also there are students who take up to 10 subjects; this gives students an opportunity to have optional subjects and to choose the best result among the passed subjects. To my mind NIS can also offer such an excellent opportunity to their graduates, at least 3 optional subjects.

2. The matriculation examination is taken in 3 periods: spring, autumn, and again in spring. This way a student can divide subject examinations into different periods. NIS students take IELTS and SAT or SET examinations during the year. But no one can deny taking all the subject examinations in the same period, during 2–3 weeks, is very stressful. It would be better to give students the chance for 2–3 optional subjects and divide the final attestation examination in two periods: winter, spring.

3. Conducting exams in two periods allows the retaking of failed tests next period.

4. In Finland the curriculum admits and lets the teaching staff use other ways of course, subject assessment for immigrant students, students with diagnosed impairments and comparable difficulties. But in Kazakhstan students who have diagnosed disabilities of different kinds; group 1 and 2 physically handicapped students; participants of summer competitions, i.e. candidates of the Republican team taking part in international subject Olympiads and scientific competitions are released from taking the final attestation examination. (Правила текущего контроля успеваемости..., p. 7) NIS should offer these students other kinds of examination where they are able to show their competences. Furthermore, two periodic examination taking form would solve this problem.

5. Finns allow their graduates to use "Nspire" functional calculators solving trigonometrical, integral based and other heavy tasks, Mendeleyev's periodic table and reference books during examination. It would be very helpful and supportive to let our students use at least simple calculators and formulae.

Here I have restricted some numbers because of possible obstacles they can meet in Kazakhstan. For example, about the number of periods: not three but two. I have said so because every period costs money, but students' well-being is more valuable than money. As another example we can take "Nspire" calculators. In Finland maybe it is fine to let students use it, but in Kazakhstan it is impossible. The reason for it is our mentality. Our students would be glad to utilize it, solve all the tasks and write into the control work; it would decrease their motivation to learn and study hard to pass the exam; students taking SAT should be able to cope without a calculator.

Conclusion

To conclude the article it is important to note that the Finnish assessment system is trust based, student-centered and not complicated. Students are rarely tested during the studies. Summative assessment is held at the end of a semester, course or a year. External assessment from the Ministry of Education or National board of Education does not happen, except the Matriculation examination for graduates. Finns state that PISA and other similar competitions serve as an external assessment for them. The Finnish assessment system is simpler compared to the NIS one:

1. Finnish students are not given marks till the fourth grade.
2. There are no intermediate examinations.
3. Teachers put marks only into electronic register Wilma.
4. Students do not take multiple choice tests.
5. Most tasks in summative assessment and in examinations are open question tests, problems, writing tasks.

What about NIS criterion based assessment system? It is student-oriented, open and integrated. This type of assessment lets every member of the learning process understand what is assessed and how. It increases student's self-awareness and encourages goal-oriented study and self-assessment. But the NIS assessment system is complicated because of a great amount of various tests and examinations (external summative test, Cambridge external summative test, intermediate examination, IELTS taken some times) which are followed by a lot of paper work, reports, stressful situations for students and teachers. However some changes in assessment system made by NIS opposed to common secondary schools are of extremely high value:

1. Criterion based assessment.
2. Final attestation examination of school graduates.
3. Cancellation of Unified National Testing.

These and other advantages of NIS put it forward to educational institutions of the Republic of Kazakhstan. According to life-learning education and development principle NIS should develop further what it is doing now. For this purpose it should investigate other countries' practices, new theories and their implementations find more partners and adapt best practices of the world educational institutions.

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BENEFITS OF PROJECT BASED LEARNING, IN KAURIALA UPPER SECONDARY SCHOOL IN FINLAND

Nazym Sagiyeva, Aigerim Altynbekova, Maaret Viskari and Brian Joyce

Contributions by authors: Nazym Sagiyeva and Aigerim Altynbekova have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

Two reasons the teachers from Kazakhstan came to Finland was to observe and experience aspects of Finnish education at all levels. The core aspects were student centred learning with examples of problem based and project based learning. It was the aspect of 'applied' that needed to be research and understood. One such example is described and analyzed in this short report by Ms Nazym Sagiyeva and Ms Aigerim Altynbekova. They field-researched a multidisciplinary project implemented by an upper secondary school teacher that combined the sciences with art. They also list related tasks and technologies used by the students to product the required deliverables.

On returning to Kazakhstan their experiences and recommendation will be transmitted to their colleagues. This is a common feature amongst all the participants from Kazakhstan. The responsibility to disseminate as much as possible through seminars, presentations, workshops and master classes, without diluting any of the experiences and competences acquired.

Introduction

We are students at Häme University of Applied Sciences in Hameenlinna, Finland, on a pedagogical internship from 15.10.2013–15.07.2014 through the International programme Bolashak of the Republic of Kazakhstan.

The authors are Nazym Sagiyeva, a teacher of chemistry at the Nazarbayev Intellectual School (NIS) in Oskemen, Kazakhstan and Aigerim Altynbekova is an ICT teacher in №66 school-lyceum in Astana, Kazakhstan.

During the Scientific research part of our internship in Finland, we experienced several top schools through observations, interviews and teaching. Especially, the teachers of Kauriala upper secondary school in Hameenlin-

na, successfully combine subject and project based learning, which awakened our great interest. Under the leadership of the mathematics teacher Mr Sakari Salonen, over the last ten years organized a project "classical geometry in classical ballet".

Arts and sciences project

In an interview on his project work as coordinator, Mr Salonen informed the authors that he effectively integrated his favorite subject mathematics with a passion for ballet and opera. Twice a year upper secondary school students with their subject teachers can attend the premier in National Ballet and opera House in Helsinki. They can participate as spectators in the renowned fairy tale genre premiers such as "Swan Lake", "Cinderella", "Sleeping Beauty", "Nutcracker" and "Snow Queen". After the premier, students and entertainers conduct the meeting and interview. Teachers interconnect knowledge and emotions of students from ballet with the school course:

- write an essay on literature
- familiarize themselves with music and composers on music lesson
- take into account physical laws in movements of ballet dancers, after that solve assignments, which were designed by a physics teacher
- in the art lesson, describe and portray scenery and dresses
- in the school's dancing club and physical education implement new dance movements
- analyse the performance revision about geometric transformation, rotation and reflection on project course "Classical geometry in Classical ballet".

Mr Sakari, the master of his job, could combine art and subjects for fostering generation with authentic learning. He enhanced interest in art and knowledge among the students, and project achievements aroused social curiosity, furthermore, Mr Sakari gave an interview on TV three times and was reported in newspapers.

Digital teacher project

Another project, called "Digital teacher in Häme", embeds information and communication technology in the learning process for implementation. It is funded by the National Board of Education of Finland. Mr Tuomo Iltanen, the principal of Kauriala upper secondary school, suggested this project and it covers eight schools in the Hämeenlinna area. With the help of a young specialist Mr Aleksi Lahti, courses are conducted to enhance teachers' ICT skills.

Interdisciplinary project-based learning in Kauriala Upper Secondary School

The main target of this project is for teachers to prepare students in the use of digital tools (laptops) necessary for the revised curriculum and matriculation examination which will utilize these innovations in 2016.

Eight schools carried out a case study with the view to identifying the benefits of iPad and their applications as used in daily life. For instance, in one of the parallel classes only iPads were used for learning instead of textbooks, notebooks, or, and in the other class studying was carried out using traditional methods and resources.

- During the lesson students, using iPads, are able to perform tests in on online mode by using “Socratic”, “Google Drive”, “Survey Monkey”, “Moodle” web environments.
- In runtime written work (essays, writing, report, essay, etc.) using an application “Creative Book Builder”, in a specially created group for a class, students can create a personal “e-portfolio” where they can share their work, materials with their classmates and teacher.
- Through using applications (iMovie, Book Creator, Popplet lite, Qrafter, Prezi, Drawing Pad – қосымшалар) students can quickly handle and convert the information with an increasing use of cognitive activities and creative skills.
- Although the teachers spend more time creating electronic versions of the test, they are saving time on the automatic verification.
- Teachers can edit comments and corrections in the electronic version of the creative task (essays, writing, report, essay, etc.), which reduces red tape.

Enabling the development of communicative skills of the younger generation and developing innovative technologies, prepares students for life's journey.

Finally one other wide scale project being implemented is funded by the partner "Tablet school", which covered 37 schools. The main goal of this project is to create digital learning tools "e-book" for future with accordance to new 2016 curriculum. We decided to share the best practices of teachers in these leading schools of Finland with our colleagues from Kazakhstan.

Further Reading

For more in depth information of our studies please refer to our website: https://sites.google.com/site/projectaignaz/.

Tablets in Finnish schools 1 – http://www.helsinkitimes.fi/finland/finland-news/domestic/11621-schools-encouraged-to-make-better-use-of-smart-devices.html

Tablets in Finnish schools 2 – http://www.goodnewsfinland.com/archive/themes/education-technology/tablets-in-the-classroom/

USING THE DIALOGICAL METHODS IN LEARNING AND TEACHING PROCESSES

Aitzhan Kazhkenova, a geography teacher in No 31 school-gymnasium in Astana, Kazakhstan, Brian Joyce & Maaret Viskari, Häme University of Applied Sciences

Contributions by authors: Nazym Sagiyeva and Aigerim Altynbekova have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

In week 11 (10–14 March) Ms Aitzhan Kazhkenova participated in a 5-day course 'Dialogical methods and learning community' run by Helena Aarnio, Ph.D., Principal Lecturer. The course comprised observations, readings, YouTube videos and dialogical tasks in the classroom. Ms Kazhkenova found this part of the pedagogical course the most useful and was fully absorbed in Dr Aarnio's expertise. This empowerment process encouraged her to interview Dr Aarnio and go deeper into the theories behind the methods and then to adapt them to her teaching in Kazakhstan. She had already decided to disseminate her new competences to her colleagues of other subjects. 'Dialogical methods and learning community' can be applied across the disciplines. Her short article below describes her process of development and awareness.

Introduction

Nowadays it is very important to introduce changes to the educational system that will benefit students in the way they apprehend the lessons taught at schools. The modernization of the teaching tactics influences the students' lives and brings out the potential in them. The way a teacher approaches a student is essential, because students are still developing their personality and the foundation of their personality and maturity process is built while at school. The most important pedagogical task defines a priority, strategy, and identifies the key directions of research in the direction of development of methods during the training of students.

Currently, society is diversely communicative assuming not only building cooperative relations as well as mutual understanding, but also underlies the emergence of contradictions and polemic disputes. As a result, the

Practicing dialogical interaction

future graduates of school will have the ability to carry fruitful, effective dialogues in the various areas of sociocultural spheres. Therefore, the pluralistic type of dialogue becomes the most important and communicative of all dialogical methods.

The main hypothesis of this research consists of dialogical interaction between the teacher and the students during a lesson that will be based on dialogical learning methods. There will be questions asked to students that will allow them to quantitatively and qualitatively measure their own participation in various activities. This exercise will strengthen and influence their motivation skills and increase educational performance.

Dialogical methods

Dialogical training is the type of learning that provides a creative assimilation of knowledge by the student through a dialogue that is specifically designed by a teacher. One of the differences between dialogical learning and the usual transfer of knowledge is that a student does not receive the "truth" in the finished form, but opens up with the support of an adult and cooperates to receive new knowledge. As a result the student learns how to solve problems independently, and learns how to find a few solutions. The word "dialogical" means that a statement of an educational challenge and search for a decision to that challenge are carried out by students during a dialogue, organized by the teacher.

The most common dialogical methods are known as statements of learning material that come in the form of a reporting conversation where questions are generally used in the study guide. Teachers can also come up with challenging tasks by creating a number of problem sets which require students to learn new concepts quickly, though the teacher explains the steps they should take in order to answer correctly.

The dialogical method is simply based on the training material and on the reporting conversations with the purpose of explanatory principles of training by the teacher. Assimilations are done by the students; they motivate the students to participate in active conversations.

Classroom rules:

- Create problem sets during an active conversation
- Introduce students to active conversations that require justification; proof; assumptions and hypotheses
- Mark students on the basis of their activeness during the class discussion

The Dialogical Learning Methods are effective, as they..:

– Develop self-confidence
– Make homework more interesting
– Develop an understanding of responsibility
– Provide the chance to express one's own opinion
– Students become aware of their own way of thinking, and how other people have a different or similar opinion to them
– Better self-control
– Students gain the skills that are necessary for society

Overall, using this interactive training, a teacher should teach students to be capable of not only self-education, but also how to use their newly learned knowledge for the solution of important problems. The teacher has a variety of methods to choose from that can motivate students during the study period.

As a result, the dialogue carried out in the classroom becomes a source of independent research done by students that helps them to think critically and influence their way of thinking. Dialogues are needed when there is a situation that has to be discussed, researched, and needs critical thinking. Competence is a challenging part of the study that results in training and allocates different types of competences.

After the interview with Helena Aarnio and after reading her work on dialogical methods, I have come to the conclusion that dialogue training organizes the educational process in such a way that all students are being involved in the learning process. Therefore, students have the opportunity

to participate and reflect on the fact that they can state their own opinion and learn to do independent research to support their argument.

Conclusion

My long term goal as a geography teacher is to teach students how to think critically, analyze situations using the dialogical learning methods. During classes, students not only solve complex problem sets, but also learn how to come up with alternative suggestions as well as learn and participate in the dialogues. Overall, the teacher's main goal is to create a comfortable atmosphere in the classroom and make an emotional connection between the students so to break barriers in the classroom.

I hope that my research interests not only geography teachers. Overall, dialogical learning methods: help to overcome the monotonous process of training; help to develop the ability of students to participate in conversations; teach tolerance towards other people's opinions, and teach the ability to carry on a dialogue. The method gives a chance to students for self-expression and self-realization.

Running a Master Class for peers and evaluators.

HOW TO MAKE AN ACTIVE IMPLEMENTATION CURRICULUM FOR LEARNING PROCESS?

Bolatova Aibarshin, Sharipov Samat, Brian Joyce, Maaret Viskari

Contributions by authors: Nazym Sagiyeva and Aigerim Altynbekova have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

This project evidences the depth of research the authors reached to understand the process of curriculum development in Finland from the National Board to the classroom. The objective was that by the end of this desk and field research they would be able to identify the components and processes that could be utilized to adapt curriculum development in their own environments in NIS schools back in Kazakhstan.

When they arrived in Finland they sought answers to two questions: 1. *Why does the Finnish education system work so well?* 2. *What are the secrets to its success?*

The journey they took became a quest of discovery. They soon realized that the secrets were not in the teacher, the student or the classroom. The answer was Finland, Finnish society, the Finnish culture and a well-planned reform. Interestingly the authors were able to delve deeply into these aspects and come out with concrete recommendations, as listed in the conclusion.

The question that arises is, how many of the recommendations are culturally bound in the well-developed Finnish norms and values, which may not be yet so easily adopted or transferred into the culture in Kazakhstan where its development is still nascent? For example recommendations 1, 2, 6, 7, 9, 10 may be possible but under an organization where teachers do not have the same levels of autonomy and trust as in Finland then recommendations 3, 4 and 5 will take more time to implement.

1. Introduction

It is difficult to determine exactly what the students will need in the future and what realities we must prepare them for in this changing world, and economic and social life.

Nowadays, there are a lot of opinions and research about preparing students for the realities of the rapidly changing world.

What should we do about this? What methods and techniques should be used in the classroom to develop the functional skills of students? Teachers need the opportunities to rebuild taught disciplines and lessons according to the requirements and realities of today. After all, we submit to certain standards of learning, the curriculum to be followed and we can change them only by 15 percent.

How to create and implement a flexible and future-oriented curriculum that will consider the interest of all participants?

What should be the curriculum, that takes into account the needs and wishes of all participants of the educational process: school officials, teachers, students and parents? Are there such program types at all, or do they exist only in the dreams of creative teachers, pupils which are broken off between sports training, lessons in music or art school and preparation for infinite tests or for standard national testing? Are there such programs that allow us to make a choice not only in the direction of learning or separate subjects and courses (sections) which they can choose from the contents of one subject?

Studying of the processes of training and education at Häme University of Applied Sciences and visit to schools, interviews with principals and teachers of schools and review of lessons showed that the answers to these pressing issues indicates we can learn from the experience of creation and successful implementation of curriculum in Finland.

2. The aim of the development work

The aim of this development work is to investigate the Finnish experience of creation, development and implementation of the curriculum.

The objectives are to:
- describe the history of the Finnish curriculum system and currently trends
- identify the key elements of a successful curriculum
- list the questionnaire and to produce interview with the Principal of Kauriala upper secondary school Mr Tuomo Iltanen and with the teacher of chemistry and physics Paula Perkkalainen.

- compare each level of the curriculum: Core curriculum from National Board of education, Curriculum from Municipal and school levels
- determine how to influence the process of curriculum making, developing and implementing for success of Education system
- create recommendations of how we can transfer to Kazakhstan the Finnish experience of making a curriculum.

3. The basic educational system curriculum in Finland: description and analysis

3.1 The History of development of the curriculum system in Finland

The National core curriculum in Finland is quite a new reform. Finland has built a strong education system almost from scratch. Finland did not have a successful education system before 1970. The education in Finland had dual education systems. Such separation had affected the socio-economic background of the pupils. Thus, had created the inequality of opportunities for learning and had large gaps in achievement between children.

There were strong political debates about the Basic Education Act 1968. They said that all children should have the right to attend the same school during the first nine years of schooling. Thus the Finnish basic education was formed. First of all, implementation of this reform started in 1972 in the northern parts of Finland. Then, by 1976 it had spread to municipalities in southern areas of the country (Finnish National Board of Education 2010).

At the beginning the Finnish national curriculum there was a very centralized document. It was first reformed in 1985 and transformed to decentralization and teacher autonomy.

During this period teachers have required more autonomy. Also one of the requirements of the teachers was responsibility for curriculum and student assessment. Since 1980 a gradual growth of professionalism of teachers helped to raise the status of teachers, satisfaction, and effectiveness (Sahlberg 2011, 18).

After 1985 the curriculum became student oriented. In 1994 the curriculum reform gave municipalities more freedom. As argued by Laukkanen (1995, 24), this was adopted by many municipalities, especially rural ones, as new central guidelines to be implemented in a technical and non-reflective manner, so that the new curriculum was never properly internalized.

"To help promote greater local flexibility in the curriculum, the National Board of Education devised a scheme for 'aquarium schools' located throughout the country" (Vulliamy & Nikki 1997). Starting in 1992, some schools were chosen as experimental schools. They were tasked to make

Learning how to design a project learning environment.

their own curriculum according to the new educational guidelines, designed by the National Board of Education. Previous national curricula in the 1970s were made without feedback from the teachers. Then politicians were keen to attract the active participation of practicing teachers for curriculum development. As noted by Norris et al. (1996, 31), this reform strategy was similar to implementing a series of "action research cycles of curriculum development within the project schools", the benefits and successes were observed by the National Board of Education in order to inform the national legislation on curriculum change.

What ensued was the "new Framework Curriculum for the Comprehensive School 1994" (National Board of Education 1994a). This curriculum took into account the allocation of teaching hours in subjects. It also provided some guidance for curriculum development and for the organization and management of schools. In a way, the emphasis was on schools to develop their own curricula and to involve teachers and parents.

On the basis of the curriculum reform of 1994 the aim was to "change over to a new type of curriculum planning, not only to update curricula" (National Board of Education 1995, 8). This is because it required a more flexible approach to teaching and learning, focusing on acquiring skills, rather than the actual content.

It also affected the recognition that "research shows that teachers' participation in the writing of the curriculum is an important prerequisite for any real changes in the inner workings of the school" (National Board of Education 1995, 9). The beginning of 1994 the new framework curriculum was

directed to schools. The schools implemented their new curriculum and then their local school board approved.

3.2 Important Features of the Curriculum system in Finland

The local curriculum is constructed on the basis of the national core curriculum. Local producers of the curriculum, the school administration and teachers use a common structure and the main directions of the national core curriculum to make the local curriculum. The National core curriculum consists of two parts. Initially, it consists of the purposes, mission, values and structure of education, integrative themes and core content of subjects. Secondly, it illustrates the concept of learning and aims for progress of the educational environment, operational culture and teaching methods (Finnish National Board of Education, 2011).

As argued by Erja Vitikka, Leena Krokfors & Elisa Hurmerinta (2012, 83), the core curriculum on the one hand is a document, which comes from the National Board of education, on the other hand it is a tool for teachers to increase their own pedagogical competence. This kind of curriculum is more suitable for making implementable plans. The current curriculum system in Finland is based firstly on management, secondly autonomy of municipal authorities and thirdly usage of teachers as respected experts. The local municipal authorities provide and organize education teachers develop the school-based curriculum (The Finnish National Board of Education, 2011).

As noted by Tiina Tähkä and Erja Vitikka (2012), that curriculum is a strategic document, which reflects our best understanding of humanity, society and learning, also it covers all areas of school life, not only school subjects. Furthermore, the National core curriculum describes:

- Common values
- Mission and structure of education
- Conception of learning
- Principles for organizing instruction
- Principles for student assessment
- Support for learning and student welfare
- Objectives and core contents of subjects

3.3 The Finnish educational steering system

The core curriculum of basic education in Finland is a tool for learning. Apart from this curriculum it is designed as one part of the governance of education and has a pedagogical destination. Generally it is a guidance for teaching staff.

The Basic Education Act and decrees are major documents for education at school level. The Council of State defines the main goals of education and the time distributions for different subjects (Figure 1). The National Board of Education creates the national curriculum, which has basic principles the local and school curriculum (The Finnish National Board of Education 2006).

In addition to this, the schools create their own curriculum or this can be the curriculum of all schools in the municipal region. In addition to this, schools can make their own curriculum. Thereafter, it is approved by the school officials of the municipality.

As noted by Halinen and Järvinen (2008), municipalities and schools provide more autonomy to educational institutions and the implementation of the core curriculum.

"Municipalities are autonomous in providing education according to the law and to the National Core Curricula. They provide:

- employment and use of financial and personnel resources
- design and maintenance of school buildings
- the number and location of schools
- municipal curriculum
- teachers' further training" (Halinen 2011).

We are convinced that empowerment of schools and the teacher's autonomy are very high compared with other countries. When making the curriculum they can choose resources, objectives and content and also the teaching methods and materials and forming study groups.

The municipalities were the primary educational providers. They could independently define how utilize finance, which taken from government. Municipalities got autonomy to manage schools, teaching process and budget. Schools play the main role for developing and implementing the curriculum (Vitikka, Krokfors & Hurmerinta 2012, 83).

In 1998 a total reform of educational legislation followed and was directed on goals, pupil rights and duties (OPH 2010). Evaluation was enacted. The purpose of national testing was to get an idea of national learning outcomes. Furthermore, in Finland has never been the national testing system for all students. In 2004 curriculum reform was more centralized and for the first time, the national criteria for evaluating were presented (the Finnish National Board of Education 2004).

"Local education authorities and teachers approve the school-level curriculum and school principal's play a key role in curriculum design" (Sahlberg 2011). Teacher education ensures their well-developed knowledge and skills curriculum planning.

"When school staff talk and decides together on issues like values, learning objectives, good learning process, learning environment, pupil assessment, etc – it is the best possible professional development for them. The quality of the curriculum improves when pupils, parents, municipal authorities in health and social affairs and in other areas, NGO's and other stakeholders join the curriculum process" (Halinen 2011).

Textbooks, manuals, workbooks released by private publishers have a powerful influence for education (Heinonen 2005). At the Finnish schools all textbooks and other materials are not approved by the government.

All the textbooks have been checked in advance and schools regularly visited school inspectors, but now this practice is canceled. Earlier, the National Board of Education had considered all the textbooks, but now private publishers make textbooks and other teaching materials independently, according to the national core curriculum. The government does not regulate and finance.

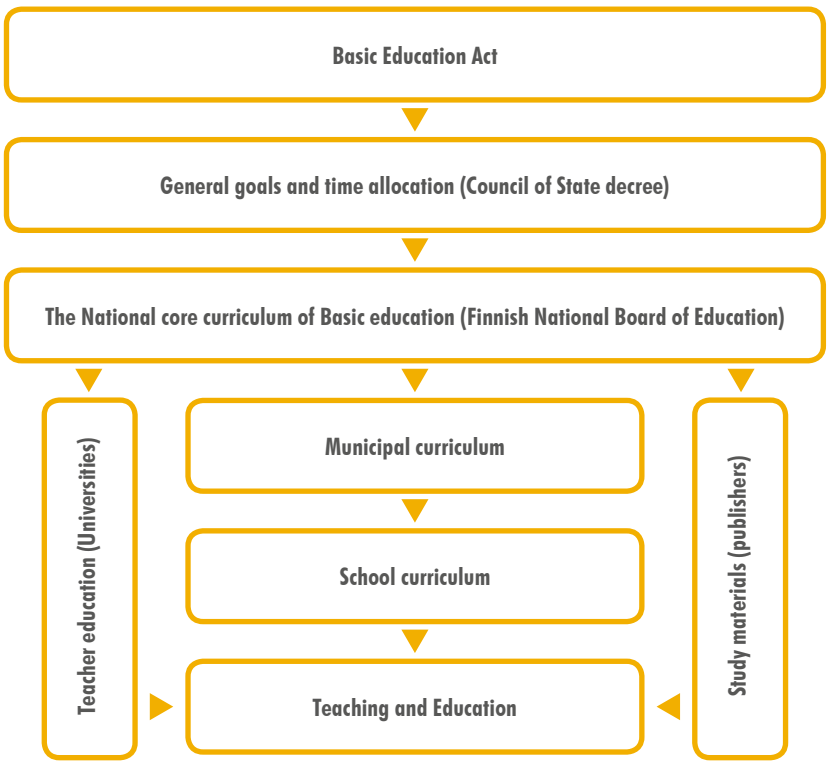

FIGURE 1. Governance Structure and Curriculum System in Finland

When local authorities receive a national core curriculum, it passes through several levels of administrative work.

From the point of view Irmeli Halinen (2011), the curriculum as an interactive and strategically important process. The national core curriculum, municipal curriculum and local curriculum are related to each other very closely. Consequently, the curriculum is more a process than a product (Halinen, 2011).

3.4 Three main functions of Finnish curriculum

The Finnish national core curriculum has three basic elements. Firstly, it serves as an administrative document, secondly as an intellectual document and thirdly as a pedagogical document. The first category included as part of the national governance of education and international co-operation and development. The second category includes knowledge that is culturally significant and current conceptions of knowledge.

The third category is as an instrument for teachers, pedagogical advice and counseling and guidelines for education.

Clearly, the Finnish national core curriculum is guidance for teachers. This is acquitted by the need for national solidarity, equality, and the basic right to education (The Finnish National Board of Education 2006). The core curriculum became more accurate and detailed document on the national level. All details, including guidelines and central contents were clearly defined.

The curriculum as a steering document has a strong judicial remit. In the 1970s the idea of equality was one of the main priorities of the education system. All people have the right to a quality basic education. This principle continues today. Regardless of nationality, social background and where you live, everyone has the right to quality education. The greatest advantage of the Finnish steering system was to create equal comprehensive schools across the country.

In addition to the national curriculum also has a reasonable assignment (Antikainen et al. 2003). As a rule, in the national core curriculum can find common objectives, contents and specific evaluation criteria to each subject.

In Finland the curriculum is highly academic in nature. It consists of 18 different subjects. According to Sulonen “the continual increase in subject contents in the curriculum has led to a justified criticism of the curriculum being too information oriented and fragmented” (2010). Apart from this, the curriculum functions as a pedagogical guide (Vitikka 2004).

"Curriculum is a professional, pedagogical tool for teachers and school principals, for municipal education leaders and for national education authorities" (Tähkä and Vitikka 2012).

According to Irmeli Halinen (2011), the curriculum is as a road map. She said that you would get lost if you tried to use the map of Edmonton or Rovaniemi in the streets of Helsinki.

New educational innovations are implemented through the development of curriculum. The curriculum is a tool for the development of teachers' pedagogical thinking and forming their own teaching practice (Tähkä & Vitikka 2012).

3.5 The influence of two different didactic schools in the Finnish curriculum design

In Finnish curriculum design can see a close link between the aims and contents. From a historical perspective, two very various didactic schools (Figure 2) have influenced in the Finnish curriculum. (Autio, 2002, 2006; Gundem & Hopman, 1998; Kansanen, 1990; Malinen, 1977). First of all, the Finnish curriculum obliged more to German didactics called Herbart-approach. Herbart school with its concept of "Lehrplan" was presented into Finnish consideration in the early 1930s (Kansanen 1990, 1995; Siljander 2002). This school of thought, oriented on content as the centre of teaching and learning. Next, the North American school of thought, Dewey and his concepts influenced the Finnish curriculum in the 1960s. From their perspective the curriculum should be organized around the child. The subject cannot be the center of learning. In the curriculum the learning has become the center of education and includes a broader learning objective, i.e. learning outcomes. Still this dual structure is the basis for development of the Finnish curriculum. It has become a discussion about integrated curricula and subject-based curricula (Tähkä & Vitikka 2012).

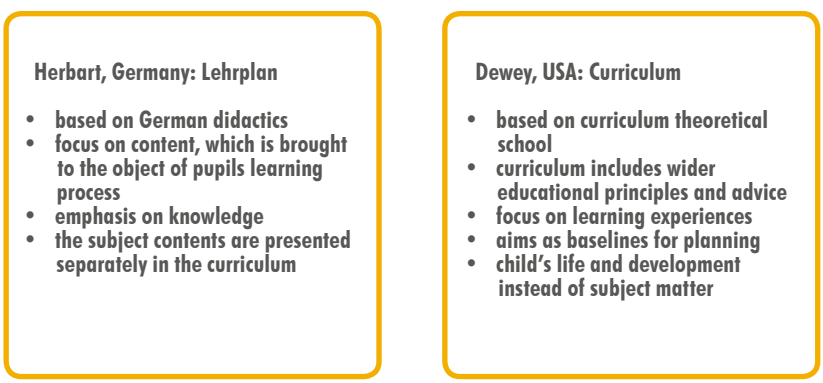

FIGURE 2. The influence of two different didactic schools in the Finnish curriculum design

The Curriculum reform in Finland has always discussed by hot debate. The core curriculum has to be focused either subject oriented or a cross curricular. Apart from this equilibrium between two various traditions is at the centre of curriculum design internationally (Eisner 1975). The curriculum determines the skills and knowledge needed to reach these competencies, which are the bases to achieve the aim and expected results (Saylor et al., 1981). Socially important issues, always find their way into the curriculum (Kansanen 2004a; Saylor 1981).

The learner-centred curriculum contains information about interests and the needs of certain age groups and also of the individual students (Saylor 1981). The subject-based curriculum stresses both the objectives and content that are related to the disciplines and the competence-based curriculum is structured first of all on the acquisition of skills.

In Finland, teachers have the most important role in the assessment of students. Schools do not use standardized testing to determine the students' success. There are three main reasons for this. First, they pay more attention to each student individually. Therefore, the success of each student in the school is more important than statistics. Second, education authorities consider that student assessment is used to improve the work of teachers and students during the school year. Third, the schools themselves determine progress and social development of students, and not the external auditors. Teachers are the best judges as their own students in the school (Sahlberg 2011).

Collaboration between national curriculum authorities and local administrators for development of the curriculum is highly developed in Finland.

4. Curriculum design, development and implementing at school level

4.1 Curriculum creating process at school level

The National Core Curriculum was approved in 2003 and is currently in action. According to Irmeli Halinen, it is intended to cover the common objectives, and it also plays a guiding role based on shared values, which allows a coherent curriculum to be built at the local municipality and the school level.

The local municipalities have opportunities to take into account local requirements and capabilities. In school teachers have the capabilities to expand the curriculum and consider wishes and expectations of students and parents. Each school should create an annual plan for implementing core curriculum in every school year. But there are many questions to be answered before the process can be understood:

- How is the process of creation of the program at the school level carried out?
- What organization carries out the expertise of these programs?
- Where are they approved?
- Are there specific recommendations to the creation of programs at this stage?
- Can we be sure that the program created by a team of school teachers will meet all the requirements to the content of the programs?
- What authority controls this process?
- How does the process of approbation of the program occur?
- How is the efficiency of this program checked?
- Who is engaged in creation of textbooks to this program?

To get answers to these and other questions we first studied the program of this school and then conducted interviews with the principal of Kauriala upper secondary school Tuomo Iltanen and with the teacher of chemistry and physics Paula Perkkalainen.

The curriculum in Kauriala high school was prepared in the period 2003–2004. The curriculum team was brought together, which included the school's expert teachers. Related issues were discussed at these meetings of the curriculum and contributions for each subject and courses were included in the curriculum guidelines as a single document.

Kauriala high school faculty discussed the Education Day in the academic year 2003–2004 values, business culture and themes related issues. The school's mission and business idea was explained and discussed in focus and the values of the new curriculum starting points. Students' life management and student service-related issues have been discussed. Maintenance of the school, group, support group, and the school nurse and the school physician have examined the role of student welfare point of view of their own work.

The curriculum presented and discussed with the school management team and the management team were asked to comment, the parents' association, the municipality and the school's student – tutor students. Representatives of the stakeholders of the curriculum were presented in their own conference. In addition, the school's faculty meeting discussed the curriculum and approved it to be introduced from 1st August 2005.

Are there specific recommendations to the creation of programs at this stage?

The Principal of Kauriala upper secondary school Mr Tuomo Iltanen told us that the curriculum is a clear guidance for creating a program that takes into account what should be contained, and then how to work should be carried out on each section.

What organization carries out the expertise of these programs? Where are they approved?

Each school has autonomy. As noted by Pasi Sahlberg "Greater equity and autonomy over curricula and assessment seem to improve performance" (Sahlberg 2011). The school officials determine the team of teachers who are experts in their field and give them the freedom to create the curriculum. As noted by Sahlberg in his book "Finnish lessons" activities of the education system in Finland (like any other spheres) are built on trust. Perhaps, this is because the profession of teacher in Finland is one of the most prestigious in the country along with the profession of a doctor and a lawyer, every year only 10% of all who wish can come to the pedagogical disciplines in the Universities.

Moreover, to become a teacher, you must have a master's degree, and periodically every teacher passes advanced training courses (Sahlberg 2011). It follows from this that a high level of professionalism of teachers forms a trust based on the work of the teacher, not only from administration of schools, but from parents as well. The best experts here are teachers, who for several years have carried out a reflection of the curriculum and improved and changed it in connection with the current requirements.

As described in the program, the city of Hämeenlinna the Education Board discussed the curriculum in their own meeting in the spring of 2005 and then officially launched on 1st August 2005.

The first official version of the curriculum was the starting point for continuous development process. Year 2005–2006 periods was estimated based on practical experience in the light of the success of the work. Since then, efforts have been made to correct any deficiencies.

According to Irmeli Halinen, the curriculum creating process is flexible process, which considers, how change in the world may and could impact to education (Halinen, 2011).

How does the school organize this process? How does the process of approval of the program occur?

According to Tuomo, Principal of Kauriala, teachers are contracted from two to five hours in two weeks, to develop their work. It means that teachers spend minimum 46 and maximum 90 hours per year for development process. This process includes the process of curriculum development as well. The year 2005–2006 period was estimated based on practical experience in light of the success of the work. Since then, efforts have been made to correct any deficiencies. For the academic year 2006–2007, the curriculum of both general and subject specific interests was refined and developed.

The curriculum evaluation and refinement continued in the academic year 2007–2008. The working group was transferred to the new, specific groups. The next major update was completed in the spring of 2008, after three years the students have completed their studies in the new curriculum. In the academic year 2010–2011, the curriculum was updated in a common high school curriculum transition. At the same time, applying the rate changes to equate to the size of the city. The curriculum was updated later in the academic year 2011–2012.

How is the efficiency of this program checked?

The assessment work of the curriculum in Kauriala school is based on the following questions:

1. Values – are the actual values of the curriculum in accordance with the practices and everyday teaching?

2. Does the direction and vision of the program reflect the mission of the school?

3. How are daily activities of the key issues summarized and described?

4. How is the subject area described and how are they implement in practice?

5. How are the subjects in the curriculum implemented by practical work?

6. Does the evaluation work student growth and studies the motivation?

The curriculum assessment and development of the corresponding departmental groups decide the way, in which the curriculum of the evaluation in addition to the stakeholders involved in the assessment of students and teachers (the curriculum Kauriala school).

The core curriculum states that the students are also involved in the creation of programs at the school level. How is this happening?

Municipalities and schools can decide how to make their curricula based on the National Core Curriculum. In each upper secondary school the curriculum will be created in collaboration with teachers, counselors, school officials, nurses with a view to providing the high standard of general upper secondary education, its significance to community and obligation from the society as a whole, to jointly identify purpose and procedures. What is the content of the curriculum?

As described above, the Core Curriculum provides a clear guidance about what should be contained in each curriculum in high school. Below we will try to describe what is included in the school curriculum, how this process with an example of some of the sections occurs.

4.2 Mission and values of upper secondary education

Description of the mission and values of Kauriala School is a logical continuation of the core curriculum and gives a description of the activities that should be undertaken to achieve the goals set in the central curriculum. For example, in the Core Curriculum is was noted that the upper secondary school aims to provide students with opportunities to see issues from different angles. For students, it is important to bring up responsible and obedient citizens of society.

How can we achieve this? And why is this item allocated in the description of the mission and values of the school? Here we recall the words of one of our teachers if we overlooked behavior, at least one of the citizens of the country, and he will go the way of crime (even at the end of high school) this will cost the country millions. This confirms one of the key concepts put forward by Pasi Sahlberg "Prevention cheaper than repair" (Sahlberg 2011).

In addition, the high school should help the students to develop the ability to know oneself and to help in the personal development of the student, as a person.

How can we achieve this?

Each school decides on these issues independently. The officials from the National Board of Education will not give the exact and more suitable answers to the questions. Only when studying individual abilities, opportunities and wishes of pupils, it is possible to achieve desirable results. As it was described above, the team consisting of school officials, teachers, counselors and even medical workers is engaged in the solution of the matters.

Kauriala School approached this issue responsibly and creatively, in addition to regular classes, the school is responsible for the organization of leisure of students. The students are involved in project groups, which is carried out not only in Finland but also in the framework of a multi-disciplinary international cooperation and in the Internet (Network).

In addition, students from this school can arrange for primary school such as "Science club" and "Language club" (scientific and language circles). Thanks to which the younger students may find interests that will help in the future in the determining of their professional career, and the high school students to try themselves as teachers or in science. It should be

noted that this experience also helps high school students who must take a difficult exam for admission to the University for Pedagogical Specialties. As one of the stages of the exam is to determine the level of motivation of the applicants at choice of profession of the teacher.

So, the mission of Kauriala School is to prepare students in order that in the future when they meet difficulties while studying at the university, in society or in private life, they can find the solution to problems independently. The school also supports students in search of their own strengths, in professional self-determination growth, and the choice of future career. For this kind of support there is a special counseling service (counselors), which is discussed below.

The main common values for the Finnish general education are constructed from the history of Finland on the basis of a civilization, which is part of the European heritage. Human rights are the key documents defining the Universal Declaration of the United Nations on human rights, the right of child and the European Convention on human rights.

The aim is that students learn their rights and responsibilities, as well as to grow up as an adult responsible for their own choices and actions.

As noted by the curriculum in Kauriala School, the students develop not only ethics, intelligence, critical thinking, social, aesthetic and communication skills, but also self-expression.

The school cultivates patience in pupils who are intelligently curious and active and who appreciate the sustainable development of cooperation and who have the potential for structuring and planning for their future. Starting point of pedagogical staff of school is to encourage young people for continuation of study and achieve the goals of their own.

4.3 Implementation of education

4.3.1 Organization and Operation culture

The purpose of Kauriala School is to create a wide range of learning opportunities, which meet the learning needs of the student and give the opportunity to acquire the necessary life skills and knowledge.

Cultural activity is a practical interpretation of the educational mission of the secondary school.

The operational culture of all schools accentuate that educational institution principals and practice of teaching and learning must be elaborated

evenly. The operational culture covers all schools, official and unofficial rules, operational and behavioral patterns, also the values, principles and eligibility criteria, which assume the foundation of the quality of school collaboration work.

The curriculum will define the desirable operational culture. The purpose is to create all high school practices to systematically aid the accomplishment of the objectives set for its teaching and learning processes. The integrative disciplines should also discover concrete expression in a high school's operational culture (Core curriculum, National Board of Education, 2003).

4.3.2 The learning environment

The times when the learning was carried out in the classroom are not relevant these days. Effective teaching and learning requires using of different learning environments, such as Learning outside (learning outside the school), e-learning (e-learning), workplace learning, visiting theatres, museums, etc.

According to school Principal Tuomo Iltanen, Kauriala upper secondary school actively prepared to confront the challenges of the future of learning: online learning, globalization of knowledge, the ability to find and use reliable sources of information on the Internet, as well as the creation and use of eBooks. Implementation of these objectives promotes the participation of the school in such ICT projects: "New way of learning, eBooks, learning in internet"; "Digital teacher in the area of Hämeenlinna"; "Diverse learning in WLAN", as well as Networking with many countries, cultures and different kinds of school.

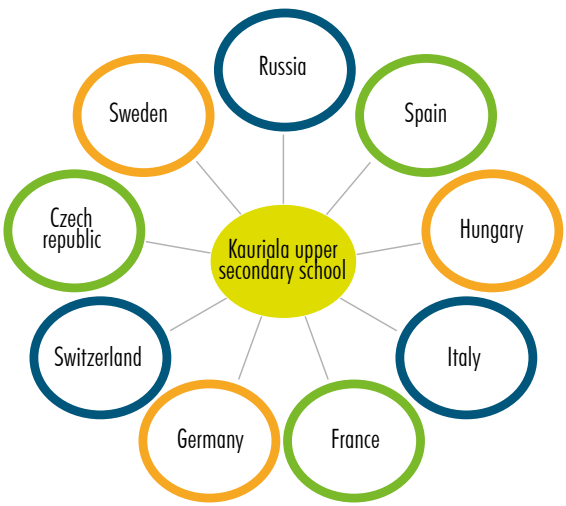

FIGURE 3. International projects. Networking with many countries, cultures and different kind of school.

Kauriala School actively uses different learning environments not only within the city and country; international networks expand the educational environment. For example, their regular partners are the staff of the center for nuclear research CERN in Switzerland, where 20 students from different upper secondary schools of the region of Hämeenlinna, under the leadership of five teachers are, every second year, doing research on such topics as: "The particle detector", "CERN made inventions, technical application and accessories", "Particle physics Cosmology" etc.

In addition, teachers and 24–25 students from different schools and cities in Finland, such as Kauriala upper secondary school in Hameenlinna, SYK upper secondary school in Helsinki, Järvenpää upper secondary school and Kastelli upper secondary school in Oulu (4–5 students from one school) participate annually in International science teaching project "Space weather science camp". The teachers carry out projects together with students and research centers in Sweden and Norway. Partners from Finland are The Finnish Meteorological Institute, Aalto University's Design Factory (space exploration, magnetometers construction), Finnish Geodetic Institute and The Metsahovi Radio Observatory, Tavastia Vocational College (GPS-positioning)

Also, the school participates in the exchange of students throughout Europe and projects include

- Co-operation with other upper secondary schools in the area of Hämeenlinna
- Integrated projects
- Languages + visual arts, literature, music, sports, history, mathematics, biology
- Financing:
  EU-programmes (Comenius)
  National board of Education
  School + students (Iltanen, presentation 03.03.2014).

4.3.3 Student guidance and support

Guidance and counseling in Finland is part of the curriculum. The students are entitled to guidance and counseling. The goal of all guidance and counseling is set in the national core curriculum. The guidance counsellor supports children who have study difficulties or who are in danger of being excluded from education, provides personal counseling, career counselling, tutoring students training, organize meetings with parents, student welfare team, transfer to the next level, choice of subjects, matriculation exam, study skills and future plans. The national core curriculum gives 76 hours of guidance and counseling from grades 7 to 9.

According to the national core curriculum, students in upper secondary schools receive one compulsory course in guidance and counseling 38 h. Moreover, they can take an optional advanced level course (38 h).

General upper secondary schools

- Objectives set by a national curriculum
- Study counsellors at schools
- One compulsory course in counselling
- Personal counselling
  Planning the studies and courses
  Matriculation exam
  Career counselling
- Tutoring students training
- Student welfare team
- Marketing

4.3.4 How students can make a personal studying plan?

According to the Principal of Kauriala upper secondary school Mr Tuomo Iltanen, every student can chose a school. If the student is interested in coming to Kauriala School, they send the cards, where the students can fill them in from the web site. Then the students can pick out the subjects for the first year. You have to choose basic or advanced level of Math, only compulsory course or voluntary course of Physics and Chemistry. Also in this school the students can choose basic or advanced level of languages, there are lots of languages, for example, English, French, German and Russian. Moreover, they can take Art, Music. The students can select compulsory subjects and applied courses.

All together there must be at least 75 courses or it can be more during the 3 years. The students make their personal studying plan (appendix 1). The timetable is divided into 3 study years and each year is divided into 5 periods. One period consists of 7 weeks. In one year the student should take about 30 courses or more in the whole year. You have to do at least 6 courses in one period. Then you should look at a weekly timetable. According to choosing subjects you can make your own timetable. It is very suitable for students. The students cannot choose teachers, maybe in bigger schools it is possible, but it is impossible in Kauriala Upper Secondary School. It also proves, that every school in Finland has autonomy. The question is however; what is the minimum number of students required for a course to be implemented? They have made the schedule in the Internet and then put maximum lines there on how many students can be on one course. If there are 10 students, the school will pay half the salary of the course to the teacher. This means that she or he will not conduct all the lessons. For example, if you have a lesson on Monday, then on Thursday you have to learn independently. Compared to the Spanish language and math, where there

are 5 students and 14 students, it is a big difference between them. It is not fair for teachers to get the same salary. If two or three students pick out one course, it is impossible to implement.

Conclusion and recommendations

As noted earlier, the Core Curriculum provides a clear guide of what should be included in the school plan and what the requirements to level of the pupil are. The school curriculum undersigns steps or measures to implement the master plan taking into account the specifics of the school, regional characteristics and capabilities and interests and preferences of students. The overarching question for the authors is how can we transfer the Finnish curriculum making experience to Kazakhstan?

As noted by the American researcher Finland can serve as a laboratory for testing innovations in education. So to transform the experience of Finland to Kazakhstan we need to:

1. Carry out retraining of teachers according to requirements of today. The modern teacher – is the one, who does not give ready knowledge to pupils and teaches them how to find knowledge independently.

2. Establish a clear guidance – the general plan of implementation of the goals and problems of the whole educational process together in one document.

3. Work on collaboration. To provide teachers with opportunities to participate in the process of creating a local curriculum. For a start, this can be at city level, i.e. teachers-experts from different schools create a plan of educational process together with psychologists and other participants in the collaboration.

4. Provide freedom for the teachers to find ways necessary to implement the central general plan and find their own methods and techniques to achieve the objectives. If the teacher feels trust, he will make the maximum efforts for realization of goals. The best judge for the teacher is a result of its activity.

5. Give the teacher the possibility to make changes and additions to the curriculum (this should not be only 15%).

6. Use various learning environments

7. Study the experience of the system of Guidance and Counseling.

8. Reduce the hours of classroom work of teachers and use the time for professional development.

9. Pay attention to the development of competences of students in the classroom and extracurricular activities.

10. Organize group projects for students. Group work for students will help to develop students' skills of cooperation that they need in real life situations.

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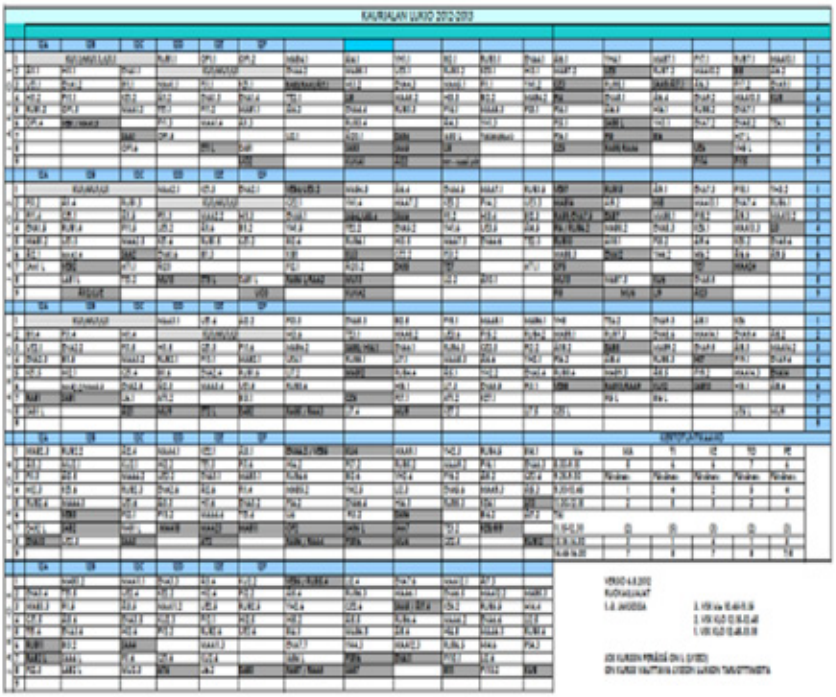
APPENDIX 1

THE STUDENTS' PERSONAL STUDYING PLAN IN KAURIALA UPPER SECONDARY SCHOOL



VOCATIONAL EDUCATION OF KAZAKHSTAN AND ITS PROSPECTS

Lyazzat Kubasheva, Teacher of Economics. Teacher of Economics Humanities and Economics Politechnic College. Astana College "Eurasia", Uralsk.
Gulim Yessentayeva, Teacher of Economics, Politechnic College, Astana.

Contributions by authors: Lyazzat Kubasheva and Gulim Yessentayeva have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

Gulim Yessentaveva (Ms) and Lyazzat Kubasheva (Ms) were both working in vocational education at the time of this article. Both teachers are a part of the transition and period of education reform taking place in Kazakhstan. This reformation is built on the back of their President's 2050 strategy enabling the country to achieve national independence since it declared independence December 16 1991 just prior to the breakup of the Soviet Union 26 December 1991.

Vocational education is changing rapidly and Kazakhstan's admittance to the World Skills in 2015 gives the opportunity for students and experts to showcase skills and competences acquired in vocation training.

The two authors were able to meet world skills experts before this and by observing and teaching in a vocational school were able to document their findings and research and disseminate them to Bolashak and their colleagues.

Contributions by authors: Lyazzat Kubasheva and Gulim Yessentayeva have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

History of Presidential International program "Bolashak"

The Bolashak International Scholarship was established on November 5, 1993 by the Decree of President of the Republic of Kazakhstan N. A. Nazarbayev.

From the beginning, the Republic of Kazakhstan needed highly-qualified professionals who could implement further reforms and represent the country in the internationally. Talented young students were able to obtain education abroad for the first time in history of the post-Soviet countries, The Bolashak Scholarship turned into some kind of guarantor of successful career growth and professional self-realization of its graduates. Year by year the Program had been gaining pace and was adapted to the implementation of state objectives. (History of the Program, 2013)

Year 1997 is one of milestones in the country's development. The Head of State presented 2030 Kazakhstan Development Strategy. For ensuring effective implementation of the goals and objectives of the Strategy, amendments have been brought to the Bolashak Program too.

In 2005 President N. Nazarbayev in his annual State-of-the-Nation-Address announced the importance of sending 3,000 young talented Kazakhstans abroad annually to study at the leading higher education institutions of the world.

This era of change dictated a need to increase the number of students.

"Within the formed market conditions, the state chose the development path that was based on the model of competitive economy and sustainable growth in Kazakhstan's priority areas with constantly increasing need in the specialists in the following sectors: industrial innovative development, education and science, management, marketing, logistics, new information technologies, housing and utilities etc. In the first years of implementation of the Program the scholars studied in four countries only — the U.S.A., Great Britain, Germany and France. Later geography of the countries of study was expanded due to development of cooperation with foreign universities as well as introduction of amendments to the Rules of Applicants Selection as per which the candidates were chosen among from those studying abroad on a self-paid basis. Since 2008 scientific and pedagogical specialists of the country have been provided an opportunity to undertake research fellowships abroad. There have been allocated quotas for rural youth, public servants, research and teaching staff." (History of the Program, 2013)

The report goes on to say that in order to improve the quality of the programme the number of institutes, universities and laboratories have been reduced.

During the period from 1993 through 2013 Bolashak International Scholarship has been awarded to 10,025 Kazakhstanis for studying at the top 200 universities of 33 countries of the world.

The authors who are from vocational education in Kazakhstan, won the Presidential program "Bolashak" and are fortunate hosts in the scientific-pedagogical internship at Häme University of Applied Sciences, Finland.

For six months of training, we have studied the English language; the best teachers of the University have taught us innovative methods of training; we have visited schools and conducted lessons with Finnish colleagues. As vocational teachers, we visited many highly equipped laboratories and workshops. As well as learning relevant teaching methods we attended the weekly lectures about the culture of Finland and participated in seminars.

During these months, we have learned the system of vocational education in Finland and want to tell a little about the system of vocational education in Kazakhstan.

Technical and professional education is an integral part of secondary education and is aimed at training qualified specialists in technical and maintenance work in the main directions of public utility professional activity.

Compulsory education is acquired in vocational schools and professional lyceums on the basis of basic general education (9 grades) and directed towards the preparation of workers of skilled labour (workers, employees in different areas of working life). Obtaining of initial vocational training is combined with obtaining of secondary education.

Primary professional education in specific occupations and can be purchased on the basis of secondary education (after 11th grade) with reduced terms of learning.

Basic vocational education provides equal opportunities in acquiring profession, specialty and qualifications in accordance with their interests, abilities, health to all citizens of the Republic of Kazakhstan. Vocational training can be performed directly in the workplace, in educational and industrial plants, educational centers, courses and other educational and training structures manufacturing workers, with a license to engage in educational activities.

The content of educational programs in professions in terms of regulations of their development are determined by the state educational standards and implemented in accordance with the working curricula and programs developed by the initial vocational training.

Training of qualified personnel, technical and service labor is carried out, also their retraining and professional organizations in initial vocational education is carried out by professions (specialties) and occupational groups determined by the institution, together with employers, employment service and citizens personally.

In the initial vocational training organizations students can receive education full-time, evening, distance learning in the state and Russian languages. It is possible to establish branches, refresher courses and retraining, evening (shift) department (group) in groups of occupations, educational facilities, landfills and other structural units.

Industrial Training is carried out in training workshops, laboratories, ranges, educational farms schools, pupils at construction sites, fields, farms, businesses, customers, i.e. employers. Industrial training can be provided for the establishment of industrial and agricultural products and consumer goods in the classroom and outside, whereas professional practices are carried out in specialized companies and institutions.

Secondary vocational education institutions (colleges, schools) supply training on the basis of basic, secondary and primary vocational education. This is on a competitive basis and is aimed at training specialists within secondary vocational education.

Citizens who have secondary education and initial vocational training in related specialties may receive their vocational education reduced through accelerated programs.

In organizations of secondary vocational education, training is carried out in full-time, part-time, evening, distance forms of education and external studies. The order of reception in the organization of secondary professional education is established in accordance with the standard rules of admission for training in the organization of education, implementing professional training programs for technical and vocational education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated November 29, 2007 № 587. Professional practice is carried out in specialized organizations (enterprises, institutions).

Reflecting on a recent visit to a vocational school

Professional and technical education in figures

Overview of technical and vocational education in the Republic of Kazakhstan for 2011

No	Basic facts	Measurement units	Amount
1	Educational establishments of vocational and technical education	institution	894
2	Specialties	specialties	185
3	Qualifications	qualifications	495
4	Funding	billion tenge	52.9
5	Tuition average in the republic on 1st student by government order amounted to: – in vocational schools – colleges – thousand.	 1 000 tenge 1 000 tenge	 203.3 191.1
6	Students admitted: including the state order (from the republican and local budgets)	1 000 people 1 000 people	216.8 90.6
7	In the system of vocational education work: engineering and pedagogical staff including trainers	1 000 people 1 000 people	45 5.7

Prospects of development of system of technical and vocational education

The state pays great attention to the development of the system of technical and vocational education, popularization of professions and occupations for which training is conducted by organizations of professional and technical education.

By decree of the Government of the Republic of Kazakhstan dated 11 August 2009 № 1211 established the national Council for technical and vocational education and training under the Government of the Republic of Kazakhstan.

By the decree of the President of the Republic of Kazakhstan dated December 7, 2010, № 1118 approved the State program of education development in the Republic of Kazakhstan for 2011–2020, which displays the path and indicators of development of the system of technical and vocational education.

In November 2009 the Ministries of education and science, energy and mineral resources of the Republic of Kazakhstan and Association of legal entities “national economic chamber of Kazakhstan” Union “Atameken” signed

the Memorandum on creation for the Support Fund of support of technical and vocational education.

In order to study and borrow progressive world experience in implementation of important projects with leading international organizations benchmarking and partnerships were set up with:

- the German society of technical assistance on the development of curriculum, modular programs
- the European Commission on development of social partnership
- the Centre of education and training (RKK, Norway) – to promote the training and retraining of personnel in oil and gas field
- Inventor (Germany) – to improve the skills of teachers and masters of industrial training
- the British Council – to ensure the quality of training and graduates employment
- the European training Foundation where there is the implementation of the methodology of developing programmers based on competencies for professional education and development of its potential in Kazakhstan, establishment of professional standards in the tourism sector, to study the experience of implementation of the European qualifications framework.

Twenty-four leading educational institutions in technical and vocational education have signed a cooperation agreement with world-renowned colleges in the UK, including 14 colleges with Cambridge Regional College.

The Ministry of Education and Science of the Republic of Kazakhstan signed the protocol 2-intent on cooperation in the field of technical and vocational education between Concord Consulting Group «UCPMI» (France) and between GEMCO INTERNATIONAL BV, University of Applied Sciences FONTYS (Holland).

In 2010, the system of technical and vocational education in Kazakhstan, along with 29 countries attended the Torino process, i.e. participatation in international comparative studies conducted by the European Training Foundation (Turin, Italy).

There is work on creation (based on existing institutions) of some modern interregional centers for training and retraining of personnel in priority sectors of the economy, which will focus the necessary resources, equipment, educational laboratories, workshops, common areas.

So, by order of the Minister of Education and Science of the RK, dated July 15, 2009 № 345 created: training centers for the processing of meat and milk products in the administrative centre Akmola oblast on the basis of the Agricultural College in C. Katarkol; service centers in Almaty on the

basis of the professional Lyceum № 6; for metal processing in the city of Karaganda at the vocational school №15. These and other centers will be financed at the expense of local budget funds, borrowed funds of subsoil users and other employers, and through paid services.

The following are under construction:

1. Interregional center for training and retraining specialists for the oil and gas industry on 700 training places, in Atyrau.

2. Interregional center for training and retraining of personnel for the fuel and energy industry in 2008 Ekibastuz.

3. Professional lyceums for 800 pupils, in Astana and S. Shayan Baidibek district of South-Kazakhstan region for 360 pupils.

4. Interregional center for training and retraining of personnel for the engineering industry, in Ust-Kamenogorskaya through paid services.

In the framework of the State Program of Forced Industrial-Innovative Development for 2010–2014 public authorities have analyzed staffing needs. The total demand of 287 000 people is needed; for the accelerated industrial-innovative development – 108 000 people. Demand for specialists with technical and vocational education is 58 200 people, coming from 543 training institutions for technical and vocational education.

Further initiatives are thirteen branches and industrial projects in all regions have designed the mapping for staffing, together with Akimat's defined basic education projects, and currently other enterprises have signed 61 contracts for training (eg "Taraz Metallurgical Plant", "smelter" "Leather production", etc., resulting in trained and employed 831 people).

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The Kazakhstan Ambassador to Finland, Galymzhan Koishybayev, supports the Bolashak programme in HAMK.

Workshops were an integral part of their training.

A visit to Tavastia in Hämeenlinna.

SPECIAL NEEDS EDUCATION

Gulim Ayasheva, Aizhan Akiyeva, Brian Joyce and Maaret Viskari

Contributions by authors: Gulim Ayasheva and Aizhan Akiyeva have designed the idea and setting of this article and written the original manuscript. Brian Joyce and Maaret Viskari have provided theoretical and pedagogical guidance during the process and written aspects to the theoretical framework and to the discussion of the article.

Background

Kazakhstan recently signed the UN Convention on the Rights of Persons with Disabilities. At the time of signing, legislation containing a framework was ready for educating people with disabilities. There are more facilities available for rehabilitation but there are two challenges 1. Inaccessibility of buildings and 2. A shortage of qualified teachers.

The authors were aware of the developing state of Kazakhstan's special needs education and took the opportunity to benchmark what Finland had to offer. The first visit was to Seminaarikoulu (primary school) where they witnessed special needs pupils integrated into all the classes. The second example was the vocational college Kiipula and their report is full of observations, which they hope to take back and share with their colleagues. Ms Gulim Ayasheva, in fact, was given the opportunity to relate her experiences on Kazakhstan national television in late summer 2014.

Introduction

From 5th – 9th May we had a 5-day module on special needs education with Senior Lecturer Simo Uusinoka, M.Ed., and Senior Lecturer Irmeli Lignell, M.Ed.. The first day we had a presentation about special needs education, which is the practice of educating students with special needs in a way that addresses their individual differences and needs.

The lecturer Simo Uusinoka considered different definitions about what special education and special needs education are. He briefly explained the history. Vocational special needs education and training (SNE) is intended for students who need special support with their studies and subsequent placement.

Special Needs VET in Finland

Special needs VET is provided by regular vocational colleges and colleges for SNE. There are seven colleges for SNE in Finland, including one Swedish-speaking college. You can find information on these college websites:

The lecturer explained about SNE.

- Aitoo Vocational College www.aikk.fi
- Bovallius VET Center www.bovallius.fi
- FPD Järvenpää Training Center www.ijkk.fi
- Keskuspuisto Vocational College www.keskuspuisto.fi
- Kiipula Vocational College www.kiipula.fi
- Luovi Vocational College www.luovi.fi
- Optima www.optima.fi

The principles of special education

The main principles of special education are inclusion into a common group and integrated groups. Students are provided with individual guidance and support with their studies and daily living. In addition to programmes leading to upper secondary vocational qualifications, colleges for SNE offer preparatory education for upper secondary vocational studies and preparatory education for work and independent living. Some colleges also offer vocational adult education and training and pre-vocational preparatory education for immigrants.

Special needs students receive individual support in issues relating to studies, rehabilitation and employment. Cooperation with students, their family and other experts forms an integrated part of studies.

How we studied – class assignments

After the theoretical part of this module, we were divided into 4 groups and worked in those groups. We had an activity like a station, at every station we had certain task to do. Station tasks:

– What are learning disabilities?
– How would you create a positive atmosphere in your classroom?
– What are the Human Rights? http://www.un.org/en/documents/udhr/
– Allowable and Unhampered school, Flexible school, School for all

By doing these tasks, we tried to understand this topic as deeply as possible. We performed them as is if we had some disabilities. We got a bit of experience and different emotions.

Material for task "Human Rights"

Our group work "T-skirt"

A learning disability is a neurological disorder. Children with learning disabilities are as smart as their peers. However, they may have difficulties with reading, writing, spelling, and reasoning, recalling or organizing information. Learning disabilities cannot be cured or fixed, it is a lifelong issue. With the right support and intervention, however, children with learning disabilities can succeed in school and go on to a successful life, often distinguished careers later in life. Special needs children can be handicapped, blind, deaf, mute, have sensor problems, have learning disabilities such as dyslexia, dyscalculia, reading, writing disabilities, misbalance, an possess behavioral problems.

We considered how we could create a positive atmosphere in the classroom. We determined each teacher should:

- Change how you interact as much as necessary: talk, teach, and communicate positively, with each student.
- Begin each class by greeting the class full of students with smiles, smile with your eyes too.
- Encourage the students with positive feedback whenever possible.
- Cover the walls of your classroom with positive messages: posters with motivational pictures and words, inspirational quotations from great people, positive paintings, prose, and poems, done by your students.
- Embed more positive words in everything that you write and talk about.
- Create a positive word for the day and start a discussion on it.

How we studied – a visit

The following day we visited the vocational college Kiipula http://www.kiipula.fi/en (Picture 4 on the next page) for special needs students. Kiipula's head office is located in the countryside of Janakkala in the province of Häme, where the natural beauty of the surroundings offers a relaxing environment for studying and rehabilitation. The distance from Helsinki to Kiipula is 90 km. Kiipula also has offices in several cities in Finland.

Firstly, the project director Mr Petteri Ora gave us a short presentation about this college, its history and some information about different projects. The centre is divided into three sections:

– Vocational College (Special Education and Adult Education)
– Rehabilitation Centre
– Kiipula Garden

Kiipula College was founded in 1945. The history of rehabilitation in Kiipula dates back to the beginning of the 20th century. In 1907, the last living child of Kustaa and Wilhelmina Kiipula died of tuberculosis, and as Kustaa Kiipula – member of the Finnish parliament – passed away, his wife decided to leave their house and property for the use of institutions developing treatment for tuberculosis.

Nowadays, this is a college for students with special needs. This education consists of basic and additional education, workforce education, preparatory and rehabilitation education and guidance. The college provides and develops vocational and rehabilitation services in co-operation with other organizations.

The Kiipula vocational college has a project involving prisoners. It is like a rehabilitation center for them. In addition, they have exchange projects. Students and teachers have possibilities to go abroad for 2–3 weeks. It is important they do their best to find a job for their students. After this, Principle Mr Markku Aunola continued his presentation about this college. Firstly, he described his own experience. He worked as lecturer in Häme University of Applied Sciences, then he changed his job and now he has been working for 14 years.

The centre is designed for 600 students. The government allocates €33 000 per student. Those who study there are disabled people, those having behavioral problems and people needing rehabilitation. The aim of Kiipula Rehabilitation Centre is to support the well-being of its students by improving their ability to work and function. Multi-professional teams plan and carry out rehabilitation services. They create an individual rehabilitation plan for each student.

Kiipula Vocational College

The main study principle is “Learning by Doing”. The important thing is the government provides all the conditions in order to prevent these people with disabilities from becoming criminals, addicts or societal exclusives. They try to give them opportunities to be equal members.

Kiipula consists of 17 different buildings and all of them perfectly equipped. There are 1–2 storey buildings with less classrooms but more workshops and computer classes, practice rooms, gardens, greenhouses, a shop, cafe, dormitory, and gym. Every space is for students’ work and learning by doing; mentors and assistants lead their work and help them. Cafes and shops are working like real ones; book-keeping is done by special needs students.

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Kiipula Garden is specialized in all-year-round greenhouse production. There are some full of flowers and tomatoes; the greenhouses, which are well-equipped, have many kinds of machinery, even those which put soil into pots. Everything is automatic, easy to maintain. The main products of Kiipula Garden are pot-plants, cut gerbera and cucumber, which are on sale in Kiipula and in several sale stores in Finland.

The modern facilities of the 7 400 square meter greenhouses offer an outstanding learning environment for the students of Kiipula Vocational College.

On the last day of our weeklong workshop, we started with a warm-up activity. Then we familiarized ourselves with textbooks for upper secondary schools and tools, which help improve logical thinking. I saw math books; the level of math is easier than in our country, they teach only necessary and real life problems.

Informal learning environment.

The tomato greenhouse

The lecturer Irmeli Lignell gave us group-task.

Project "Youth Guarantee"

After that senior lecturer, Irmeli Lignell told us about the project, "Youth guarantee". The objective of youth guarantee is to help young people gain access to education and employment. This is a new governmental project, which guarantees a job for youths under 25 years old. Despite there being a crisis in the EU, the Finnish government tries to find a job or offer different vocational education to their young generation; they appreciate everyone. In the last year of comprehension school, they have a project of productive learning, which is called "my own career". They learn three days by working in different work places and rest two days at school, so they get the inspiration to work and choose their future career. This process of such studying lasts one year. They need to cover only the basic programs of curricula, so they have enough time for studying and it makes popular vocational school.

Then we in groups tried to answer these questions:

1. What is an appropriate education for a student with special needs?

2. What are the arguments for and against inclusion of students with special needs into the regular classroom?

In conclusion, the main ideas that we could point out from the workshop are the following: school should not be separated from the society, because processes in society influence schools and conversely. Also, everybody should be within the limits of the system that is why the government tries to take care of everyone. Not all the children with disabilities may have learning disabilities. Special needs education in Finland is based on the law that everybody has the right to learn. The government's policy on special needs education can be seen for example at Kiipula Vocational College.

This publication covers papers presented by Bolashak interns in collaboration with Häme University of Applied Sciences experts and mentors. The collection of articles reveals that the authors adopted and developed international best practices, translating them into programmes and actions. The new pedagogical culture and educational models have been disseminated to the educational sector of Kazakhstan with a high degree of commitment. The key principles of the educational co-operation and respectful, reciprocal dialogue in the programme, were the pedagogical transformation and paradigm shift from the teacher-centered to the learner-centered approach and innovative learning methods.

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