

The Tröllaskagi Model

Teaching and learning at the ***Menntaskólinn á Tröllaskaga*** upper secondary school

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When the upper secondary school at Tröllaskagi (**Menntaskólinn á Tröllaskaga, MTR**) was founded in 2010 it was not clear how the school would be organized nor how the new activities would develop. The goal with the foundation of the school in this area was to strengthen multiple educational opportunities in the hometown and adjacent area, which is located at the most northernly parts of Iceland. It was clear that in the area there were hardly enough number of students finishing elementary education to fill this new upper secondary school. The first thing was to look at different ways of achieving just that.

In the year 2008 a new education act was passed by the Parliament which led to the development of new curriculum for the upper secondary schools, and which took effect in 2011. Thereby it was possible to develop new types of education and teaching in this new school. It became possible to link the present times more strongly into the curriculum and focus on the society that would be waiting for the students upon their graduation. It was, therefore, necessary to look at different theories in education and to look at what might support the independence of the students in such a way that they would take ownership of their own education.

During the years that the school has operated it can be claimed that some special methodology has been implemented in studies and teaching which has been called the **The Tröllaskagi Model** and characterizes the work at MTR. The school activities and the underlying model has been introduced in many parts of Europe as well as in Iceland, including at the European Conference EcoMedia which was held at the school in 2018.

Vision

To begin with it was decided to formulate concepts or values that would guide the operation of the school and would serve as the basis on which the school would function, and simultaneously would be its vision. The idea was defined by the words: initiative – creativity – courage. Each term was led by a special approach which could be interpreted as follows:

INITIATIVE. Initiative in teaching methods, study methods, organization and working methods. To fulfil this goal entrepreneurship was placed at the heart of all study lines of the school with the purpose that the students would adopt the ideology of entrepreneurship towards solutions, project work and approach to problem solving. This phase of the studies should preferably be finished during the first term or as early during the study as possible, the purpose being that the students would be able to use the approach of initiative and entrepreneurship through their whole study.

CREATIVITY: Creative teaching methods, study methods, organization, and work methods. It was considered that the arts would train creativity with the students, more than most other subjects, and subsequently a phase was introduced in the center of studies about the arts where the students would create paintings, photographs, and music. An emphasis was placed on ways to create solutions, not only one way but many, and that the work process and creation could be more important than the final grade.

COURAGE: It was clear that habits and traditions would pull people towards following the beaten tracks and some considerable courage would be needed to change the studies, study habits, teaching methods, project work, processes, assessment and so on. Courage was given a leading role and even though not everything lead to the desired outcome, it was considered important not to give up, but rather to learn from experience, build on what was well done and show courage to change working habits, work processes, and methods.

During the decade that the school has operated, the three mottos have become the vision. Although the interests, and the subject issues have been varied, it has been clear where the school is going, and the common vision has strengthened the school's operations and the new energy has been useful in developing the school for the future.

DISTANCE LEARNING AND TELEWORKING

Whereas shortage of staff in rural areas would be an obvious hindrance to diversity in studies, opportunities, and possibilities, it was clear that distance learning and teleworking would form a constant factor in the activities of the school. This way it would be possible to offer more variety within the studies and strengthen the operational foundation of the school by enlarging the number of students who were not located near the school. When it became clear how many local students had selected different subjects, the study groups were filled with distance learning students which guaranteed the operational foundations of the school all along. Emphasis has been on the equality of distance learning students and local students by providing equal access to the support services of the school. There is no difference in the hiring of the staff members whether they are working from a distance or locally. All enjoy the same terms of employment and same salaries.

Educational approach within the studies lies in the spirit of collaborative learning whether the program is offered to local students or through distance. This means that there is no difference between the distance education and the local studies, same demands, same project work and same return dates. This has been very successful, and the local operations have not been displaced when it has not been possible to come to school because of bad weather or blocked roads. It has also proven to be very useful when it has not been possible to offer local studies because of disease prevention rules. An effort is made to create handy timetables for the staff members in such a way that they do not have to travel for many days to school or by improving cooperative studies. All staff meetings are distance meetings and the same is the case with many meetings of committees and councils.

INFORMATION TECHNOLOGY

Emphasis has been placed on the systematic utilization of information technology in the school's operations, both to achieve the goals concerning distance education and teleworking as well as in the work of local student. More than one hundred computer programs, apps and other tools are used in the

school, both in the studies and in the general operations of the school. Systematic training and development in the use of these tools is a constant process, however with the focus of the subjects each time rather than the tools.

TEACHERS' PROFESSIONAL DEVELOPMENT

To sustain knowledge, improve and develop the operations of the school, the school participates in a variety of cooperative projects. The projects are both Icelandic, Nordic and European in addition to projects which can reach to different countries. This way there is constant professional development in place which improves the operations of the school. A part of these projects is in the form of a grant for studies abroad but both teachers and staff in support services have the opportunities to attend courses in Iceland or abroad. They are encouraged to do so, and the schools looks for grants which makes it possible for them to travel and get familiar with the best on offer in Europe and other parts of the world. All staff members have been abroad, studied with teachers in other countries, compared what they are doing, shared their knowledge with them and learned from them. It has been very empowering for the staff members who have come to realize the strengths in their work.

Besides this, the staff operate constant professional development within the school through subject meetings which are every two weeks where they share their knowledge, discuss methods, and continue to develop the studies and the school's operations. It can therefore be claimed that within the school there is a good learning culture.

THE CURRICULUM

The current curriculum of upper secondary education from 2011 offers flexibility in the operations of the school and offers good opportunities for specialization to secondary schools as well as flexibility to focus on the characteristics of each school, the needs of the students and the society. This means to recede from centralization which characterized the former curriculum towards decentralization. This was the guiding light when the school curriculum of Menntaskólinn á Tröllaskaga was formulated. As said before the mottos of the school, initiative, creativity, and courage, have been at the center through all the operations of the school, but at the same time it is necessary to look at the foundations of education which are specified in the curriculum. It is estimated that the time to complete secondary school with the student examination will take three years, and the graduation is on third level.

According to Education Act no. 92/2008 each secondary school must formulate its own course of study which are forwarded to the Directorate of Education for confirmation. The study lines can vary from one secondary school to another. In fact, it can be claimed that the Menntaskólinn á Tröllaskaga has developed one study line with different specializations. It means that of the 200 credit points there are 86 credit points of common studies that all students must complete. The specialization is then formulated in the additional 74 credits in social sciences and humanities, natural sciences, sports, and outdoor activities as well as the arts. Furthermore, the students have free 40 credits which they can utilize to further their specialization or more varied studies which appeal to them. Despite this, the study arrangement has not been confirmed as one study line.

The school offers nine confirmed study lines, where the core, specialization and free choice form the study line. In addition to the five lines mentioned here above, the school offers an alternative where

only the core is defined, and the students can define their own studies in cooperation with the school. These are the basic study lines which are 90 credit points with graduation from second level, student-line done after finishing studies in practical trade and a study line for the handicapped.

In spite of emphasis on the flexibility of studies and freedom within the curriculum, the operations are however, in fixed order and organization. The student projects are placed in week-long periods where the students get assignments and other information about the studies of each week on Monday morning and in all cases, they need to hand in their project, no later than the following Sunday evening. Extended deadlines are not permitted. This way a weekly assessment is guaranteed, and the student can organize his/her work on Monday morning and control the work accordingly. Organized class meetings are set up as “working hours” and are not assigned to a special subject line but rather defined as the student’s workload. The students control which subject they are working on at each time and have access to teachers for guidance. This way the work processes are organized by the students themselves.

From the beginning, each semester has been divided up into two parts, around the so-called mid-term week. Then the traditional schoolwork is abandoned, and the teachers work on mid-term week assessment, and the students participate in week-long projects on different and varied subjects. Most frequently teachers and leaders from outside the schools come to the school with new knowledge and diversity for the students. Here we are talking about both foreign and Icelandic individuals. This has proven to be very precious for the school and this way it has been possible to link together the operations of the school and society in general.

The teaching environment Moodle has been utilized from the beginning. It was selected since it makes it possible to solve a variety of issues, such as to formulate examinations and project banks, link reading machine for the dyslexic and many other functions. Moodle is very extensive as a teaching system whereas it does not place limitation on the developments of the school functions, but it should also be mentioned that there are other systems like this.

Gamification has been introduced into teaching of English in order to encourage students to be more involved in their studies (Dichey, C. and Dicheva, D., 2017). That experience has been studied and utilized in conjunction with other methods in other subject areas. The main advantages of using Moodle are the tools that the system uses by supporting gamification in studies.

Evaluation is very varied, and the students can often select how they chose to approach their projects, provided that they can show their knowledge of what the subject is all about. Through this method the aim is to approach different strengths of students by providing them with the opportunity to show what they are good at. The school offers continuous evaluation, which in most cases, is followed up with formative evaluation. Such continuous evaluation is carried out in dozens of cases in each study phase during the school semester, but a final examination is not used as an outcome. This does not mean that there are no examinations at the school. They are only a part of the evaluation and not very extensive.

As said before, emphasis is on that the school activate creativity among the students, making them independent and increase their responsibility for their own studies. This way we believe they are best prepared for the future in studies and work. Þuríður Jóna Jóhannsdóttir (2017) did research on the characteristics of the school operations at Menntaskólinn á Tröllaskaga. There she looked at what was the most characteristics of the model that has been created at the MTR. It was found that the role of the

school is to make the students independent, creative and that the school is influential, inside and outside the neighborhood in a creative way. The role of the school is to be an empowering force for the students and the society. The final conclusions of the research were that the Tröllaskagi Model is very likely to provide equal opportunities for all students to study. Clear framework on certain parts of the schools' operations and evaluation, supports students' literacy on the school's environment and their ability to keep their plans and reach their goals. The conclusions of the research should indicate that the model which was created upon the foundation of the school and has been described here in this article is successful has had good results.

INNOVATION IN STUDY AND COURSE OFFERINGS

Flexibility within current national curriculum to development of studies is enormous. This flexibility has been fully used by the teachers who have turned out to be an endless source of ideas for new phases. Many of those ideas have turned out to be very successful and have found their permanent place within the school's course offers. Furthermore, the students have brought up new suggestions of study phases that have been further developed. This way the curriculum is in constant development in accordance with the guiding lights of the school. Even further, each student can form his/her own studies in cooperation with the school's specialists and consequently the students are placed on their own levels where studies and evaluation are formulated in cooperation between the teacher and the student. At the same time the studies have frequently been linked to the business world, the arts, and the social life of the near surroundings and local as well as foreign specialists have been involved with the studies in a variety of ways.

Considering the changes which are now taking place in our society and the employment market, it is necessary to have the studies flexible but nevertheless hold tight to certain basic education and basic principles which are reflected at the heart of curriculum and the individual courses. At the same time the studies should cultivate the students' ambitions because that forms their ability to live and work in modern society and the society of the future.