

## **SOCIAL SKILLS DEVELOPMENT THROUGH THE BASIC SCHOOL COURSE OF NATURAL SCIENCE**

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**Abstract.** One of the targets of natural sciences is the development of social skills of a student. The process involves a few important aspects such as education objectives (knowledge, social and learning skills, values), upbringing objectives, patterns of lessons, and needs of a student. Research shows that regarding the patterns of lessons different opinions exist between students and teachers. Currently, we are facing this problem. The documents of the European Union represent new views on the goals of education which also include the development of social skills.

**Key words:** social skills, learning patterns, natural science education

### **Introduction**

Latvia is a candidate country to join the European Union, and therefore pays close attention to education in order to prepare its citizens for life in the European Union. The process includes preparation for team work, communication with different people, application of different technologies, learning foreign languages. People must be able to psychologically and practically compete in the labour market as well as to enrich their knowledge constantly developing their skills.

Knowledge of different subjects was of great importance during the soviet times in Latvia and teaching was dominating in the whole process of studies. The adoption of a new approach to the student has made the formation and development of social skills extremely relevant. Teachers and students are gradually moving to learners' society.

Social skills and abilities are necessary for every person in the process of social interaction. Social skills are only acquired in the process of communication that embraces relationship among schoolchildren themselves as well as between a child, adults and an environment, the place where s/he lives.

Communicative and organisational skills are usually pointed out. The White Paper (European Communities, 1996) of the Commission of the European Union says that social skills include mutual communication, as well as corresponding skills allowing to take up responsibility, skills to work and co-operate in the team, creative attitude towards the work and striving for quality.

Social skills acquisition is essential to every teenager. The assessment of his/her activities given by the surrounded people and fellows is highly significant to the process of self-assessment and personal development.

## **Social Skills Acquisition from Documents**

Latvia's Concept of Education (Latvijas izglītības koncepcija, 1995) emphasises the necessity to raise practical orientation in the curriculum of compulsory education as students are generally prepared for self-sufficient life during period of their studies. Special emphasis is put on thematic components of compulsory curriculum a specific weight of which is disproportionably low: the man him/herself (in the world) and human surrounding (social and cultural surrounding).

The main priority is allocated to the development of social skills in primary school. It can be reached by focusing on the selection of the content and adequate ways of studies. Successful consolidation of both will promote the completion of tasks in the educational process i.e. it will give a chance to every student to control his/her own life, to actively participate in social activities and be responsible for the environment.

The National Standards of Compulsory Education (Ministry of Education and Science, 1998) reflect the most essential ways to develop the content of basic education:

- focus on the changes from acquisition to application and utilisation of information;
- a practical orientation that accentuates functional knowledge and skills;
- integration and correspondence among subjects in order to avoid overloading, duplication and discrepancy.

Meanwhile, a chapter that focuses on the fundamentals of Technology and Sciences (Natural Science and Mathematics) formulates the main educational tasks for Mathematics and Sciences:

- to learn and apply mathematical methods;
- to discover how to apply mathematical concepts for other sciences;
- to observe natural phenomena and processes, to investigate their causes and natural laws that govern them;
- to understand and respect interconnected nature of the processes in the environment and realise how changes of one small variable upsets a balance inherent in any ecosystem at any phase;
- to grasp what consequences follow any alteration at any stage of any ecosystem, and therefore be aware of the necessity of preserving and enhancing the environment;
- to learn to observe the beauty of nature and to gain enjoyment from it.

Students learn how to examine and understand living and non-living forms, how to study causes and effects of relationship, how to discern interconnectedness of all objects in nature and an imbalance brought upon by human activity in the study of natural processes. It is important for students to respect the vulnerability of nature, to be aware of the consequences of human activity and realise the necessity for preserving a nature's balance and the quality of the environment. The study of environmental science leads to the development of research skills.

It is important to notify that compulsory school students are prepared for life and better know the ways to develop learning skills in the educational process. Readiness for life is characterized by social skills acquisition. The situation is largely influenced by school, and therefore the process of studies and cannot be reached only by family.

A report of the UNESCO International Commission "Learning the Treasure Within" (UNESCO, 1996) mainly concentrates on the aspects of personal potential: memory, power of reasoning, aesthetic values, physical strength and communication skills to develop one's personality and to be able to participate with increasing independence, judgements and personal responsibility.

It notifies that human individual development that begins with birth and continues throughout all his/her life is a dialectical process that starts with self understanding and leads the man towards relationship with other people. In this respect, education, first of all, seems to be like a journey inside every individual with its stages corresponding to a person's perpetual

mature stage. Education as a means for a successful work period is a very individual process and can be treated as a development process for social interaction at the same time. Better understanding of people through conversations and discussions is one of the most necessary components for education in the 21<sup>st</sup> century.

### **Social Skills and Natural Science Learning**

A deal with natural science didactics strongly emphasizes the objectives of social studies. They include such important fields of study as self-dependence and solidarity, communicative and general skills to solve the problems, etc. Both teachers and students meet each other having their own 'social biography' during the lessons in natural science. Therefore, specific social relations are being formed (Szreter, 1998). The relations are further observed, planned and developed having purposeful collaboration between a teacher and a student when considering different social concepts, possible prejudices, procedures and attitudes that can be stressed, changed or lessened. This is meant to prevent conflicts and disturbances in order to reach understanding and compromise (Lenzen, 1999).

Social skills are considered not only from the point of view of study methods and organisation forms but also in terms of the fields of educational study.

Natural science occupies about 10% of the whole content of compulsory education (European Commission, 2000) of the EU member states. Austria, Belgium and France possess from 13 to 18 %. The percentage of time devoted to natural science is even greater in Poland and Romania and makes up to 25 %, whereas in Latvia it is only 6 to 7 %. Students also acquire social skills at living in harmony with people and surrounding world during the process of studies.

Ron Faris (Faris, 2002) states that for each society it is especially significant to have its social capital that includes loyalty, cooperation and common values and its intellectual capital which is knowledge and talents.

Both areas of natural science social and intellectual capital are very important as it is impossible to create a surrounding world and to build up relationship with people without having cooperation, mutual communication and understanding of processes in nature.

A Czech educator J.A. Kamensky (Komenskis, 1992) quotes that there is nothing in mind that first has not been felt with emotions and this also explains the processes of cognition and social skills acquisition. Through the emotional trial and an affective approach formation during natural science lessons students are able to learn and gain social skills.

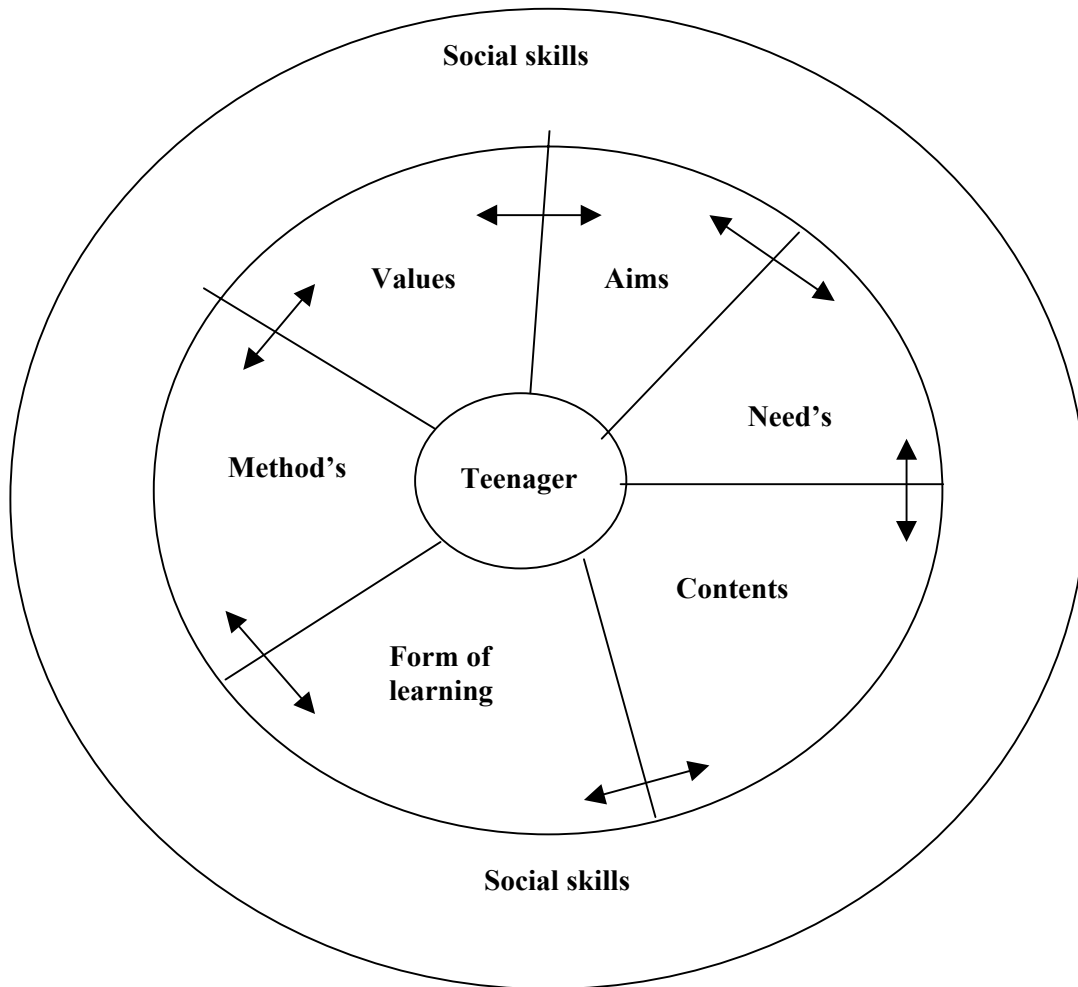
The educational process that takes place during natural science lessons can influence classes and education itself as much as it should be possible to apply it for individual and social life as a study process is a specially organized and consciously purposeful human action. Social skills also characterize one of the areas of human action. Thus, their acquisition is very important and should be included in natural science lessons as well.

### **The Model of Teenager's Social Skills Development**

Natural studies take place being in contact with other people the competence of which is taken into consideration. This allows students to better understand the types of actions and relationship that are created by society. A teenager's social skills are formed agreeably to his/her needs and values, study forms and methods and the content of study (Andersone, 2001). They all are in mutual interaction and influence the method that helps teenagers to receive social skills during natural science lessons. Figure 1 shows the model of teenagers' social skills acquisition.

The development of a child determines content, study methods and action forms in order to activate a cognition process. All three components are combined by rationale for the cognition process. The strain of cognition of different studies as well as the main reserve of self-education

strain activate and stimulate students' learning activities. This is the most important part of natural science course in basic school.



**Figure 1. The model of teenagers' social skills acquisition.**

### **Obtaining Social Skills in the Natural Science Lessons**

Along the improvement of the organisation of natural science lessons possibilities for efficiency increase and acquisition development of social skills during the lessons appear. Content, organisation and study methods of a lesson have to fulfil the role of education. Each form of organisation influences personal development.

Individual performance influences the formation of emotions, increases demands towards individuality, shows abilities and serves as basics to develop self-esteem. Teenagers appreciate individual performance to express adulthood and self-independence.

On the other hand, team performance during natural science lessons stresses the importance of group work. Team work can be observed only when students try to achieve common results. If students work as a group and have their individual tasks, it's not an explanation of team work. Only when a common result is achieved by taking into consideration each student's contribution we can speak about team work.

Work in teams during natural science lessons helps students to learn how to appreciate group results and individual group mate's success. Students have to consider other members' point of view in group work. Thus, we can find the necessity to give commands and to conform to them as well as to be responsible for others in order to be able to raise demands not only for

yourself but also and for other people. Group work in natural science lessons has the following advantages:

- educational objectives are implemented (partnership, leadership and conformation, readiness to help others);
- students' involvement, self-sufficiency and responsibility increases;
- greater role of cognition;
- extends students' contacts and join them among others in a group;
- objective self-evaluation;
- objective evaluation of other students' work.

Educational influence of frontal work is not very demonstrative. In order to organize frontal work, a teacher has to simultaneously organize all workload for team work and give students a chance for individual self-expression.

### **Opinion on a Learning form During the Lessons**

Group work as an important tool has been appraised by both students and teachers. However, group work is not so widely used in the classroom in everyday situations.

100 respondents took place in research that showed students' attitude towards group work and frequency of its usage. The students admit that group work is rarely used (rarely, sometimes and very rarely). Though it has been mentioned in 91 cases, the students' attitude towards group work is positive as 54 % of the respondents really enjoy it, whereas only 7 % of the participants have a different opinion. Project work is greatly appreciated by 61 % of the students while only 6 % of the teenagers have expressed a negative attitude towards it. So, we can estimate that by using group and project work alongside other forms of studying, the efficiency of social skills acquisition in natural science lessons would increase. Teachers suppose that though students prefer group or individual work, the learners express a wish to work either in groups or pairs. Meanwhile, teachers prefer using frontal or individual forms of work in everyday activities. Thus, we can notice discrepancies between our work and students' needs and wishes.

A Latvian educator J.A. Students (Students, 1998) acknowledges that only then studies and educational work can bring success when a teacher knows his/her learners well.

The data of research indicates (700 respondents have participated in the survey) that teachers are more focused on the needs of students. A similar situation was some 5 years ago. But a social and economical situation has changed and alongside these changes the emphasis has been put on different types of relationship. School reflects everything that takes place in the environment we live. Therefore, the need for other forms of study has found their expression. It takes time for teachers to follow these changes.

### **Conclusions**

\* Latvia's Education Concept emphasises that the objective of the educational process is to offer an opportunity for each student to develop him/herself mentally and physically and to build a strong, free, responsible and creative personality. It should be realised that both a student and a teacher share their responsibility in the organization of the process of natural science studies. Taking into consideration the above mentioned information we can assume that the efficiency of natural science lessons increases if different forms of studying are introduced. The variety applied in practice allows students to acquire different types of relationship, to co-operate with their peers and to be responsible for their decisions and actions;

\* Studying methods and the forms of their implementation including models and techniques are chosen to prepare for a natural science lesson. A choice depends on the didactic objective students' level of readiness to study and on a teacher's background and knowledge. Didactic material for lessons demands an interchange of study forms as the changes in the content of

studies demands study forms changes used to explore the topic. Educational objectives serve as the basis for using study forms;

\* J.A. Students (Students, 1998) explained the tasks of social education. He stressed that a balance between dissociation and life in society should be found with a help of social education, i.e. there should be a balance while using different study forms. These forms should be interchanged according to students' needs in study situations, content and tasks. Each study form has its advantages and a different effect on social skills acquisition. Significance does not lay in the study form but in its adequacy to study and in the educational objectives raised by a teacher. One of these objectives is students' social skills acquisition;

\* At the beginning of the 21<sup>st</sup> century, educational paradigms change. As Norwegian educator S.E. Fjeld (Fjeld, 1995) stresses, the main aim for every school is to develop an integrated being and students' social and study competences become more important. Due to paradigms shift there are four principal theses that can be considered as the basis of education:

- learning to know how to apply tools for understanding;
- learning to creatively cooperate with a surrounding world;
- learning to live, participate and cooperate together with other people in all areas of mankind;
- learning to individually develop personality.

The last three principal theses include social skills in their widest dimension. Social skills are necessary in order the man could be able to act, co-operate, apply his own experience and gain experience from others, to recognize responsibility for himself and other people. This is more important when speaking about teenagers. They slowly face the adulthood and acquire necessary social skills. This should be considered in every natural science lesson.

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## **ОСВОЕНИЕ СОЦИАЛЬНЫХ НАВЫКОВ В КУРСЕ ЕСТЕСТВОЗНАНИЯ ОСНОВНОЙ ШКОЛЫ**

**Рудите Андерсоне**

В государственном стандарте основного образования Латвии одной из задач, выдвинутых к курсу естествознания, является освоение ряда социальных навыков, важность приобретения которых отмечена и в документах Европейского Союза. В итоге это поможет ученикам лучше подготовиться к их дальнейшей жизнедеятельности.

В статье предлагается модель освоения социальных навыков учениками в курсе естествознания, в которой подчёркнут ряд важных аспектов: цели (знания, социальные и учебные навыки, ценности), учебные формы и методы, содержание, нужды учеников.

Проведённое исследование показывает, что существует различие между мнениями учащихся и учителей относительно форм учебной деятельности во время урока. Это существенно влияет на сам процесс и результаты освоения социальных навыков. В основе подбора форм учебной деятельности выдвинуто их соответствие учебным и воспитательным целям, одной из которых в курсе естествознания как раз является освоение социальных навыков.

**Ключевые слова:** социальные навыки, формы учебной деятельности, курс естествознания

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