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Collection of Students' and Teachers' Experiences In Latvia





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COLLECTION OF STUDENTS' AND TEACHERS' EXPERIENCES LATVIA

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Introduction

The involvement of schools and the teachers was successful. The schools were interested in the project. However, there were difficulties in complying with the term of handing in the questionnaires. It was due to communication by email and over the phone. The communication was delayed and so the necessary documents from schools were not handed in time.

Recruiting of the Portal users

Now five technical schools which train students in different specialities from different regions of Latvia are involved in the project. At first the schools were contacted by telephone conversation to invite them to participate in the Goerudio project. Two teachers of technical subjects from each technical school are selected who are involved in the project activities. Subjects they teach are Mathematics, Physics, Chemistry, IT and professional subjects such as Railway Station Construction, Rules of Railway Technical Exploitation, Electronic machines, Colorifics and mechanical equipment. 200 students from the above mentioned technical schools are involved in the project. The seminars were held in order to inform about the project activities and the Goerudio comprehension method. Recruiting strategy has been evaluated as satisfactory, but there was delay of getting all the correct information and documentation from the schools. It is considered because communication via email takes more time than direct communication. In general teachers are interested and willingly join in the work.

Collection of teachers' and students' experiences

Collection of experience questionnaires started after the first seminar organized on March 21 at RSTS. Ten teachers took part in the seminar. The forms of a student experience and a teacher experience were presented at the seminar. Teachers' and Students' Experience Forms were sent to teachers by email. The explanation in Latvian was arranged in order to help students and teachers to describe their experiences better. On the second teachers' seminar on April 14 where raised questions about difficulties in filling these experience forms. There were provided more in-depth explanation and example of best experience description. Further activities in collecting Experience Forms were made by email.

Conclusion

As mentioned previously, the main form of communication was email. Teachers sent both their own filled in experience forms and students filled in experience forms. Many of them were filled in Latvian, so we translated them in English.

The main strategy of collecting student and teacher questionnaires was by email. There were difficulties handing them in on a certain date, therefore the terms were not complied with. Also it was difficult to motivate some teachers to fill in the questionnaires because of work obligations in the end



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of the school year, such as, exam session, graduation arrangement etc. On the whole, collecting of the questionnaires took a long time and were not made fully, but the teachers and students filled them in qualitatively, which gave a basis for the analysis of difficulties in the study process. On the whole, 51 teacher questionnaires and 100 student questionnaires were collected. There were made analysis of collected Teachers' and Students' Experience forms and made important conclusions.

Analysis of teachers' experience forms

Several troubling factors have crystallized during the teachers' survey, the most important of them are:

- incomprehension of the processes and the texts, lack of attention as well as variety of students;
- excessive computerization which delays the need of students' own written material - students use the Internet resources;
- rather inadequate evaluation system where comprehension is not evaluated;
- the lack of basic and consecutive knowledge;
- old study and visual materials.

The teacher experience of usage of different methods is determined by his own experience and the corresponding strategy and tactics. The used methods can be divided into two groups on the condition that organisational methods overlap with study methods:

1. organisational methods which are used as study methods on their own and in different combinations such as work in groups, research, laboratory work, practical work, application of technical means, presentations, work in nature, taking part in working out study materials, application of research projects, combining different methods, etc.;
2. methods facilitating comprehension of study material such as application of comprehension models, using the links with the real life, application of analogically working study aids.

The organisational methods are most widely used. They have been most widely mastered and universally available, the methods have been worked out and the exchange of experience has been done.

The methods facilitating comprehension are closely connected with creativity, transferring problems from one field to another, noticing analogies and, moreover, thinking out of the box. Majority of teachers are using their own materials, analogical study aids or corresponding situations from the real life. This method is successful, but is used individually and each Latvian student cannot participate and cannot use the results of other processes. Some teachers have already been using the method Goerudio which is based on comprehension facilitating models worked out by students. The models are collected, checked and available for everyone in the site www.goerudio.com. Collection of comprehension models and their checking are available in Physics, Biology, Chemistry and Mathematics for secondary school students for secondary school courses in these subjects in Latvia. This method involves students in working out comprehension models which are done by using many organisational methods and it unleashes the creative potential of the students.

It is worth mentioning that this method is universal and can be used in any classroom, and it does not depend on the ability of the teacher to create the model because the students themselves work out the model and the teacher's role is to check the models presenting them to the audience for discussion and collection if there is such a possibility. The methods are being worked out for applying creation of models of this method during the study process as well as applying already existing models during the study process in order to comprehend the study material better.

Analysis of students' experience forms

The difficulties mentioned by students are:

- it is difficult to remember the theory in order to do larger papers than tests (consummation of



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time to achieve the aim);

- during note taking it is difficult to understand what notes we are taking - without comprehension, dictated by the teacher or from Power point presentations;
- during the lessons we have difficulties understanding the rules and regulations;
- it is difficult to understand and to remember the terms;
- it is difficult to imagine the discussed processes in the real life.

Wishes of students:

- more laboratory work in order to connect the theory with practice;
- the theory is complemented by a practical part (experiments, touching the object with your own hands, etc.)
- examples from the nature are obligatory.

Conclusions

- students feel the need of associative thinking (a rhyme, not a comprehension model);
- informal approach to the study processes;
- a student is not interested in the things he cannot understand.

The opinions of the students about using comprehension models and the following conclusions:

- the way how to think out of the box;
- the models unite learning both at school and out of school;
- while forming models students think more and more untraditionally;
- forming models get students interested not only to study at school, but also at university
- a handy way of studying and stable, too;
- an interesting way of studying using other students' models under the guidance of the teacher (interesting and funny);
- the distance between the teacher and the student disappears;
- more modern approach to imagine the processes in the real life;
- the fact that the models have to be formed in the state language and in English gives the assurance that the knowledge is more comprehensive and stable;

There are several possibilities for application of the models - the models which explain the theory and the models which clearly show where the theory is applied in practice.

- comprehension models should be introduced at schools, then they will be used at home, too;
- comprehension models are psychologically closer to students' way of thinking, therefore they increase the interest of the students' about a particular question;
- a method for explaining difficult and abstract processes;
- steadily forming own models or using the models formed by other students the level of knowledge increases.

The questionnaires used are from Riga State Technical school, English gymnasium, the research project of Emils Pinkis 2012 in the frame of the project.

Overall analysis of Students'and Teachers' Experience Forms gives broad description of difficulties that applies in teaching and studying process. Teachers provide common difficulties in teaching their subject. As shows the experience, Goerudio method is based on comprehension creation while studying scientific subjects. That gives an important basis of promotion and spreadinf of Goerudio method in wide range of schools.



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