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"Who wants to be eminent?" Assessment method and software

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Abstract

In this paper we are going to present an assessment method and software which can make the evaluation phase of education exciting. The presented software is a classroom application of the famous TV-game: "Who wants to be millionaire?"

Keywords: classroom evaluation, computers in education

MSC: K.3.1

1. Introduction

In the modern concept the assessment is not only a teaching and educational method, but also a regulatory element. Using the information obtained through assessment the teacher's and also the learner's activity can be regulated. It is an advantage if the feedback information is often produced as the teaching-learning process can have a fine-tuning [1, 2, 3].

The methods applied today in education are various, partly the traditional assessment methods are still present, and partly they have broadened with the methods of scientific research and with the methodical requirements connected to them (objectivity, validity, reliability). The computers and the appearance of computer networks focused the attention on testing, as it can avoid several shortcomings of the traditional methods, but – unfortunately – it creates new ones.

The ideal teaching-learning process should be practical and in the same time enjoyable. Furthermore "the school should focus on educating not just the mind but the whole." [4] The question we have analyzed is whether we can extend this basic principles of Comenius to the assessment phase as well.

Our endeavour is should not be considered a pioneer work as several researchers and teachers have achieved good results in this field. The computer and later the appearance of the computer networks have brought new possibilities. Another help might be the media itself. Many TV-games have become popular, which beyond

the game itself are meant to educate and in the same time to assess the player's level of knowledge. The success of these games has shown that it is not impossible to make the assessment exciting as well. Of course, there is a big difference between classrooms and TV studios: the worst thing that can happen to the player is that he might not win, whereas for the student the examination might end with a bad mark or with a failure at the exam. Therefore, the educational software inspired by TV-games is more often used for the revision of the learnt part than for examination.

For example such applications are the classroom implementations of the popular TV-game Jeopardy [5, 6]. An other successful TV-game is "Who wants to be a millionaire?". Although many teachers have been inspired by this TV-game and have created software for testing the students, we think that the testing network software "Who wants to be eminent" created by us is from many points of view a pioneer in this field and can be considered one of the most successful implementations of the above mentioned TV-game. Many applications, though they exemplify very well the way different classroom implementations can increase the efficiency of the teaching-learning process, are far below the possibilities offered by computers and computer sciences [7, 8, 9].

2. The software

The "Who wants to be eminent" software is a user-friendly application, which you can access through the internet as well. The software can be used as three different types of users: we can log in as teacher, responsive student or "spectator student". Contrary to the TV-game there can be several responsive students.

The software can be exploited in different operational modes. The classical testing mode has been implemented, when the students get the questions one after the other one and the software sums up the good answers at the end. In the implicit "eminent" mode the students have to answer nine questions and if they answer all of them correctly, with the 1 point received officially means a 10 mark (in accordance with the marking system 1–10 used in Romania). There are two margin values as the 5 and the 8. The questions are grouped in three categories of difficulty. The software chooses the first four questions in a random order from the first (easiest category), the next three from the second category (up to mark 8). Finally the last two questions are chosen from the third category (up to mark 10). The responsive students can stop the process of their assessment any time; if they are contented with the result they have obtained and are not sure in the answers to the following questions. In this case they become spectators. If they give a wrong answer, their mark falls back to the closest marginal value. Every responsive student has the possibility of the three helps: 50–50, the statistics of the spectators' answers, chat with one of the spectators. (See Figures 1, 2.)

The whole testing process is continuously monitored by the teacher: The students when and how answer the questions? When and which helps are used by the responsive students? (See Figure 3.)

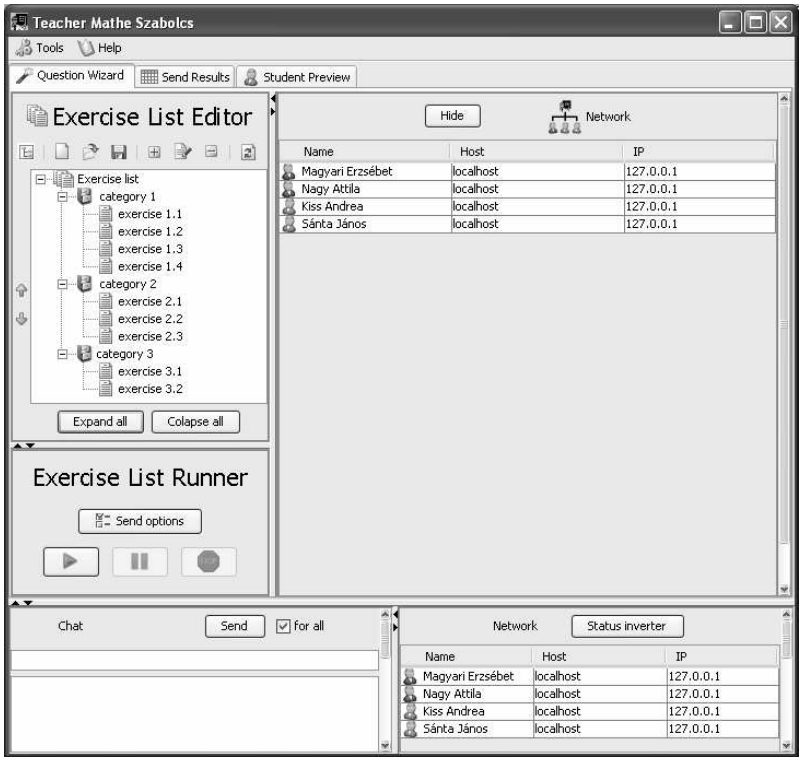


Figure 1: The teacher interface

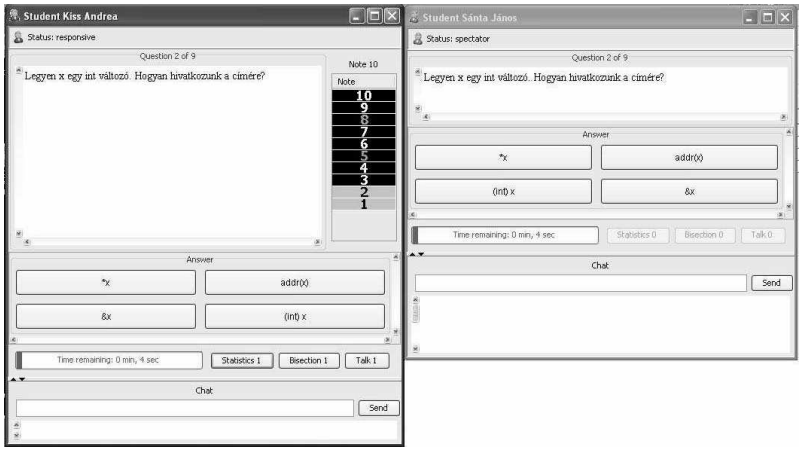


Figure 2: Responsive and spectator student interfaces

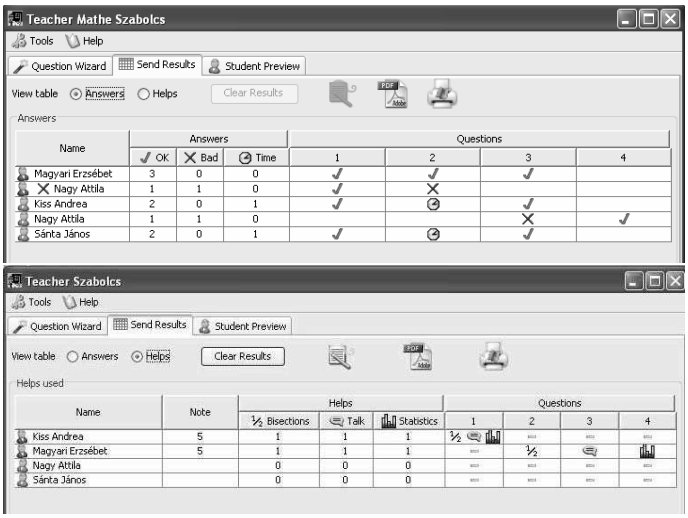


Figure 3: Monitoring the students' answers and the help options they have used

3. An examining tool

The "Who wants to be eminent" software can be well used for examination, for subjects which allow the assessment based on testing. We suggest the following course of the examination:

- Firstly we run the software – twice consecutively – in the "eminent" operational mode. Firstly the half of the class are responsive and the others spectators. Secondly we invert the roles.

- Then the program runs in classical testing operational mode.

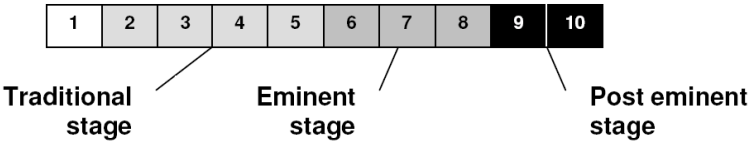
- Eventually we write the higher mark into the examination register.

By ending the examination with a traditional testing (which is generally accepted and which would have been performed anyhow) and by writing the higher mark, we ensure that the student can only win from the "eminent" operational

mode. Evidently, they reach better result in this operational mode than in traditional one. This is critically important, since we want to reserve the game character and the excitement of the eminent testing.

4. A questioning tool

In order to use this software in the classroom as well, we have developed an mixed operational mode, too. In this case the responsive students get the first four questions in a traditional testing system. This means that in this early stage of the testing the bad answers are not punished so drastically. After answering the fourth question, the software displays the points reached by the student, which will be considered the first margin for the "eminent" mode starting at this moment (the next margin will automatically be set for three points higher). In this second eminent stage of the questioning process the three help options become available. As we pointed out above, the students who have "fallen out" or stopped their questioning process, will take part in the following testing as spectators. In this so called "post eminent" stage of the questioning the correct answers of the former responsive students can also be taken into account to a certain extent.



5. Conclusions

By developing the "Who wants to be eminent" educational software our aim was to give a method and tool for the assessment process, which can bring excitement into testing, activates the whole classroom, beyond the evaluation it teaches and educates as well, has all the advantages of testing compared to the traditional way, exploits maximally the advantages given by the computers and computer sciences and leaves behind a data base which makes extensive educational research possible. We have also paid attention on building into the software the advantages of the already existing applications, next to the original ideas. The following summing up of the method's advantages ensures us that we have reached our goal. We hope that further experiences and research will enforce this conclusion.

- It creates spirit of contest and offers excitement, which are further resources concerning the preparation for the test.
- The classroom variant of the software "models" the teacher, who pays attention to the stress at the start, makes help possible when the student has

problems, is ready to take into account the knowledge revealed after the end of the test.

- Several students can answer in the same time. If we allow one minute for each of the first four questions, two minutes for each of the following three and two minutes and a half for each of the last two questions, we can finish the testing in 15 minutes.
- The software makes it possible to use the strong points of the "eminent" testing at examinations.
- The whole class is working, as the questions appear on the screen of each student and they have to answer. Furthermore, with the help options the whole class is part in the assessment of the students. The "eminent" mode gives a "legal" form to the way the whole class can help the responsive students. All these mean an extra resource in the preparation for the next class.
- The server monitors the activity of every student for the teacher. This eliminates the possibility, that the lack of knowledge or the very high level of knowledge of the student not being tested remains unnoticed.
- After the end of the testing the teacher already has some printable statistical figures.
- As the module editing the questions can be used independently, the students can be involved in editing the questions, which has several advantages.
- There is an electronic minute made about every second of the testing. This database makes possible a later analysis of the teaching-learning process.
- Regarding the low time needed for this testing, it can be used quite often and thus a fine-tuning of the teaching-learning process becomes possible.
- Beyond assessment, it makes education possible, not only teaching and learning.
    - It activates such features in the students as selflessness, helpfulness, sympathy. The spectator students express these features by living thoroughly the testing as though they should answer, in order to do their best with their help.
    - Self-confidence becomes evident, respectively the confidence in the classmates and the class as a whole.
    - Can contribute to the strengthening of the class spirit.
- The strict punishment of the wrong answers, the possibility to stop, the common presence of the margins and the help resources often put the students in front of choices which test them but in the same time it develops their wisdom.

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