

Knowledge Assimilating - Assessment - Revealing, and Analysis by Computer System (“Cyber 2”)

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ABSTRACT

There is shown the palace of knowledge revealing and assessment computer system in problematic of studying process perfection, there is described the functional possibilities of next version of “Cyber1”, called “Cyber2”, which was made by the author.

Attention is paid to the tasks of open tests, particularly the semantic analysis of sentences. The meaning of rating analysis of functional block and its strategy of programming realization is underlined. There is justified the importance and actuality of creating computer program trainers for preparing of the high qualified specialists in economic profiles.

Keywords

Knowledge revealing; Knowledge assessment; Computer system “Cuber2”; Semantic analysis, information technology

1. INTRODUCTION

Among directions of studying process perfection, Knowledge assimilating, revealing and assessment system has an important place.

There are interesting researches made in this direction. In recent years several computer systems were made, started with Moodle and ended with many computer systems. These kinds of systems are good tools for reducing the job of exam conducting.

Unfortunately, revealing and assessment of knowledge by computer system goes to assessment simplification.

Stereotype of understanding of computer systems has been made – choosing one correct answer from 3 or 4 possible answers. If it is possible, in some systems, using open tests has an episodic character. The goal of this stereotype is that for any sophisticated systems you made, there is a known answer in the beginning.

In conditions of concurrency, theoretically, especially for leadership of private high schools the main goal is to raise the quality of studying. But in fact, owner of the high school, uses it for making money. His main goal is not the increasing the quality of studying, but increasing income at any cost.

The result of such condition is that, in Georgia private high schools use the service offered by Image Group (Tbilisi, Georgia) – Collecting, systematization of information related to studying process and so on.

2. PROBLEM STATEMENT

For last 5 years, in Batumi Shota Rustaveli State University (BSU), the midterm and final exams are implemented and

being, conducting in about 200 subjects, by our system “Cyber1” [1]. With considering positive and negative sides of using “Cyber1”, next version “Cyber2” was developed by us. It is the inseparable studying component of Inter Business Academy (Tbilisi, Georgia). For using “Cyber2” during the studying process, and for its possibilities the monograph [2] is made. The relative analysis of knowledge demonstration and assessment system is implemented in it. The important terms of their implementation and development are established and the advantages of “Cyber2” on analogical systems are shown, including Moodle.

We note the following opportunities of “Cyber2”: Existence of maximum 3 correct answers from maximum 7 possible answers in closed tests, writing answers in open tests with numerical values and narrative sentences. Possibility to use wrong variants of words, synonyms, homonyms, abbreviations in any grammatical cases, breaking of synchronization, adding and subtracting of words. Partial and full assessment of tests. Bringing the term of difficultness in tests. Existing of help for any test and subject. Semantic method and algorithms are reviewed in [2]. “Cyber2” is multilingual. Exams are conducting in several subjects and languages at the same time. The quality of conducting exams increases if we consider the optimal exam schedule as an inseparable part of “Cyber2”. Such method of group formation, gives us opportunities to consider any interval between exams, to optimally load working places, and so on. After this, after students identification, subject selection is performing automatically. Informational fundament of “Cyber2” is the base of tests and helps. It reflects the actuality of sent material, theoretical deepness and practical orientation. For Quality Management Service, it is the priceless material for making the decision of subject studying and its perfection. In assessment and revealing of knowledge, the combined method is perspective. It includes the creative use of traditional and computer methods.

It is known, that knowledge revealing and assessment is a creative process. For example, in subjects of physics, mathematics and programming, during revealing of theoretical knowledge, it is important to reveal the students creative skills for solving the given problem. There is analogical situation in subjects of philosophy, law, and so on. Here, it is important that student reveal judging and solving skills.

So, the effective form of knowledge revealing and assessment can be reached by using the combined method – revealing creative process by traditional method and assimilating of techniques and technologies of topics and task by computer system. It is reasonable to reveal encyclopedic knowledge by using a computer system.

In BSU, for solving this problem, the way was chosen, which considers the combination of these two methods /Fig. 1/

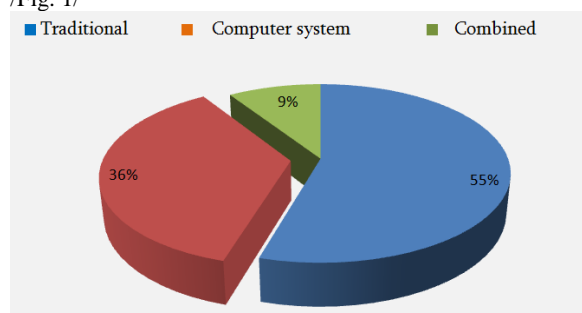


Fig. 1. Distributing of exam subjects by knowledge revealing method

As we see from diagram, from about 500 exam subjects, 301 exams are conducting by traditional method, 51 subjects – with combined method and 140 subjects – with computer system. Because of organizational difficulties, it is not possible to conduct midterm and final exams in all subjects with computer or combined systems so far, because of it, in some subjects, exams are conducting with traditional method [2].

Any system of knowledge revealing and assessment, as “Cyber2”, should be considered as inseparable component of studying process. It is used for self-control and assimilation of received materials in trainer mode and for checking and generalization of received materials in practical lessons. Theoretical and practical aspects of studying subjects of accounting by “Cyber2” is discussed in [2].

Perfection of studying process is the permanent process. Its informational fundament is the generalization of information received from “Cyber2”, its analysis and making the decision. The functional block of system analysis should agree with some conditions, from which we allocate:

- The goal of receiving the information and decisions to make.
- Visualization of analytical information with texts, tables and diagrams.
- Receiving the analytical information in electronic and printed view.

In table 1, the analysis of “cyber2” is listed by showing the receiving decisions and goals of tasks in functional blocks.

Name of task	Goal, estimated decisions
Tasks of first group: received rates of student(s) in subjects (subjects: passed, to be passed again, to be attended again), students card, report of exam topics and task answers and others.	Receiving proving information of exam passing. Formation of the table of exams to be passed again, planning the number of groups for next year, planning workloads of teachers. Ending of studying by mobility or by other cases. Giving confirming information of passing of subjects, calculating of rating, discussing of students answers during the appealing and making the decision about points correcting, and so on.
Tasks of second group: Ranging of points in subjects with different criteria and other analogical tasks.	Comparing receiving rates of pedagogies with the same subjects and same syllabus or different syllabus to the result of polls from students. Making decision about deepness of teaching of topics and teachers qualifications and others.

First is the table form of performing the results of group tasks. And second is the combination of text, table and graphic information. Text consists of the standard decisions, with showing ways of their realization and showing of opportunities.

Possibilities of MS Word and MS Excel are taken as the strategy of programming realization of result of analysis in “Cyber2”.

Particularly, results of first group tasks are received in MSWord, and tables and diagrams of second group tasks are received in MS Excel and then they are exported to MSWord. Here we should remark, that the content of standard decisions can be changed or saved by user.

We can consider using of “Cyber2” and its analogical computer systems in perfection of studying process, as zero stage (as first, in better case). The role of such system in the job of specialist is modest. Creating and developing of computer program-trainers is perspective. Such trainers are widely used for preparing of specialists for maritime, chemical, medical and other areas.

The actuality of creating computer program trainers for preparing of the high qualified specialists in economic profiles, especially microeconomic, management, financing. Its existence and using is priceless as in studying, as well as in the process of real activities. “Cyber2” or other analogical system, or modified version of “Cyber2” should be considered as the inseparable part of such trainers.

3. ACKNOWLEDGEMENT

1. Creative use of system of Knowledge revealing and assessment “Cyber2” gives opportunity to reveal the actual material and compare to syllabus. Using the term of difficulty in tests and different methods of rating, also semantic analysis of narrative sentences, gives opportunity to maximally reveal knowledge. Bringing “Cyber2” for knowledge assimilating and as the main component of studying process is the effective tool for studying process.

2. There is actual creating of computer program trainers for preparing of the high qualified specialists in economic profiles. Using trainer with “Cyber2” or with analogical systems is an effective way for studying process perfection. During implementing the trainers of economic profiles, the experience of trainer developing should be maximally considered.

REFERENCES

- [1] Tea Munjishvili, Zurab Munjishvili, Knowledge demonstration and assessment system “Cyber1”, international Journal" Information Technologies & Knowledge" Volume 8, Number 3, 2014, pp. 271-279.
- [2] Thea Munjishvili, Zurab Munjishvili. "The system of Discovery and Estimation of Knowledge “Cyber2”", Scholars' Press, Saarbrücken HRB 18918. Published on: 2015-01-15 Number of pages: 108. Book language: English. ISBN-13: 978-3-63976094-1.