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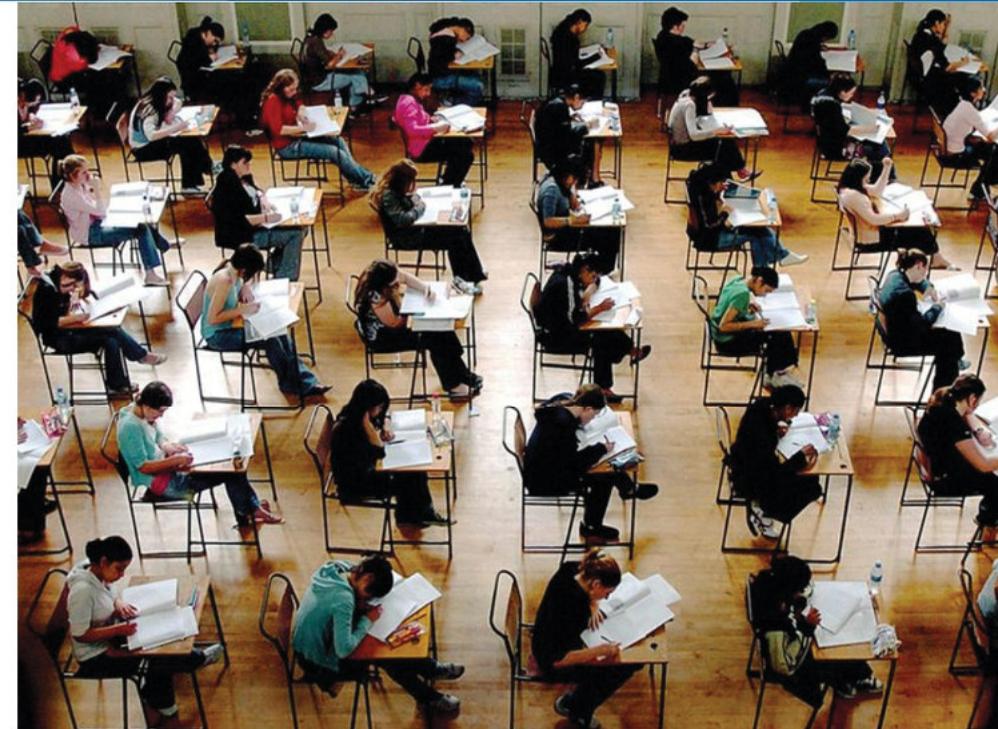
“Quality Increase in Higher Education Teaching through Innovative Methods”

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***Quality Increase in Higher Education
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EVALUATION OF EFFECTS OF USING BLOG AS AN INNOVATIVE METHOD IN TEACHING THE SUBJECT MENTAL HEALTH

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Abstract: *At the Teacher Training College in Vrsac, and within the project „Quality in education, college and universities, using innovative methods and new laboratories“, a blog has been created for presentation of student work. The modernized computer laboratory, owing to the funding from the project, has enabled the introduction of this innovative method and simultaneously raised the quality of education, locating the students at the centre of the educational process. Use of blog as a modern information and communication technology has led to specific results in the subject of Mental Health, as presented in this paper. The total research sample was composed of 37 College students who attended Mental Health during the Spring Semester. This work presents the student evaluation of effects of using the blog in teaching of this subject.*

Key words: *Internet, blog, mental health, psychology, students.*

Information and computer sciences offer a base for evaluation of new roles and possibilities of education technology and the methods of application, but these possibilities and methods should be adapted to the needs of the educational process, explained in a pedagogic way and given a meaning and purpose from the pedagogic standpoint (Danilovic, 2008). The essence of every learning process is the motivation of the learners, and the objective of every teacher is to develop and increase awareness and inquisitiveness, which can be primarily done by application of teacher expertise, manner and methods of their work, appropriate teaching means and quality content of the lectures. The topic of this work is use of computer educational technology as an innovative method and the achieved effects of this method in education/teaching.

Stepping into the new century we have convinced ourselves that the information, its availability and usability presents a base for growth and development of not only an individual, but the whole society. If education is the foundation of a successful development, it is clear that current information in this social sphere bears great importance. It means that the primary school teachers and pupils, teachers and students and professors and students have a completely new source of information and knowledge - the Internet. The nature of this medium imposes the need of replacing the current dominant method of teaching, known as „ex cathedra“-where the activity of the teacher is in focus, not of the students- with a modern IT method which focuses on the student as the centre of educational

process. In our case, the blog has been chosen as means of interaction between the teachers, students and other wider groups of interested individuals.

The blog or web blog presents a network journal or series of content on a web page, most often in chronological order, wherein the newest content is listed at the top of the page. The blog may be in the form of a magazine, topical or personal. The organization and shaping of the content is being done by blog software. One way of differentiating bloggers depends on the type of blog: personal (personal interests, topics not related to profession), professional (blog about one or more fields of industry or profession, not necessarily related to the company for which the blogger works), company blog (blog for company objectives). What contributes to a strong social interaction and forming of communities on the network are the comments of the readers (Blagojevic, 2011).

In the case of the College, organisation of content was made according to the subjects, professors, students and topic, or a wider field which the author's texts belong to, where the chronology has been preserved in the form of *widgets* (graphic element – known as window) containing the list of the newest articles. Today, the oldest articles, first published on the blog, give instructions to students how to get access to and use the *control panel* through which it is possible to create and publish articles on the blog. Then, students' articles followed, who, according to the topics given by the teachers, produced articles based on the available literature, as well as Internet sources. *Links* for electronic sources have been placed to enable readers to additionally expand their knowledge. The first student articles were followed by the first *Comments* which are introducing a new form of communication between students and professors and students themselves (Nedimovic, Prtljaga, 2011).

Motivated by the most common remarks on traditional higher education teaching which refer to insufficient student activity, lack of teaching/class dynamics and the absence of constant student feedback, and in accordance with the intensive development of computer technology, our wish was to *overcome* these problems by implementing a new method in teaching of Mental Health. In a sense, the launch of the blog on the site of the College represented an adequate *platform* as well as challenge.

If we try to answer the question from the lecturers perspective of what we wanted to innovate-improve in the teaching of this subject by using the blog (Nedimovic, Prtljaga, 2011), the expectations were the following:

- Development and encouragement of the research spirit in the students;
- Possibility of further elaboration of the content from the lectures;

- Independent choice of topics which the students will further work on (according to the subject and personal interests);
- Development of intrinsic motivation (students do not get additional academic points for the additional work of making and publishing articles on the blog);
- Encouragement of inquisitiveness and creativity;
- Use of modern information technologies;
- Independent production of articles to be posted on the blog;
- *Availability* of professors outside regular teaching and consultation hours (communication is achieved via e-mails in the phases of production, mentoring and posting of articles);
- Upgrading and broadening the knowledge acquired in lectures and exercises;
- Possibility of expressing opinions through comments to the articles.

According to these expectations, and at the end of the semester in which the blog was used, we wanted to obtain information on how the students rated the efficiency of the applied method.

METHOD

The subject of this research is increasing the quality of lectures in a college/higher education institution. The main problem is the efficiency of the implemented innovative method in teaching of Mental Health. The main objective of the research is to determine how the students evaluate the efficiency of the blog as an innovative method in teaching of Mental Health.

Sample and procedure

The total sample consisted of 37 respondents, students of the Teacher Training College, who attended lectures in the subject Mental Health (elective subject) during the Spring Semester 2011.

Table 1.

Structure of samples against the number of passed exams

o. Exams passed	Total	%
15&less	1	2.70%
16	4	10.81%
17	7	18.92%
18	8	21.62%
19	6	16.22%
20	3	8.10%
21	8	21.62%

Table 2.*Structure of samples against average grade of all passed exams*

Average grade	Total	%
6.5<x<=7.0	2	5.40%
7.0<x<=7.5	6	16.22%
7.5<x<=8.0	14	37.84%
8.0<x<=8.5	7	18.91%
8.5<x<=9.0	5	13.51%
9.0<x<=9.5	2	5.40%
9.5<x<=10	1	2.70%

Table 3*Structure of samples against average grade from the group of subjects belonging to the field of psychology.*

Average psychology group sub.	Total	%
5.50<x<=6.00	2	5.40%
6.00<x<=6.50	0	0%
6.50<x<=7.00	5	13.51%
7.00<x<=7.50	2	5.41%
7.50<x<=8.00	9	24.32%
8.00<x<=8.50	2	5.41%
8.50<x<=9.00	5	13.52%
9.00<x<=9.50	4	10.81%
9.50<x<=10	8	21.62%

The research was carried out in October 2011 at the Teacher Training College in Vrsac. It was carried out in groups. Instructions on how to fill in the questionnaire were given to the respondents, the purpose of the research was explained and additional explanations were given where needed. The time provided for filling in the questionnaire was not limited.

Instruments/Tools

A questionnaire for evaluation of blog as an innovative method was made for the purpose of the research. The questionnaire is anonymous and consists of two parts.

The first part consisted of 10 items which refer to the possible effects of introducing the blog as an innovative method. The questions referred to: encouragement of inquisitiveness and research spirit in students, possibility of further elaboration of the content from the lectures, possibility of individual selection of topics for additional elaboration, development of intrinsic

motivation, use of modern information technologies, availability of professors (outside regular teaching and consultation hours) via email during the production, mentoring and publishing of the article on the blog and upgrading the acquired knowledge from the lectures and exercises. The respondents graded the effects of introduction of the blog on a five grade Likert type scale, where grade 1 represented: *I completely agree*, while grade 5 meant *I completely disagree*.

The second part of the questionnaire held questions about the total number of passed exams, average grade of all passed exams and the average grade of exams from the group of subjects belonging to the field of psychology.

DISCUSSION RESULTS

Based on the results of the descriptive statistics (Table 4), it can be seen that the respondents, in all segments of the evaluation, graded highly the effects of blog introduction as an innovative method in Mental Health teaching. Also, by analyzing the estimations of individual items (Table 4), one can see that the respondents have singled out as the most important the possibility of using modern information technologies and the independent article writing (with instructions and mentoring from the professor). The arithmetic mean for these two items is 1.46 (remark: 1=*I completely agree*, while 5=*I completely disagree*, therefore a lower value represents a greater degree of agreement with the statement). Item 10 is the next (*the contents on the blog are well organised, searching, reading and commenting is simple*), which shows that the students are familiar with the use of modern information technologies, therefore they are suitable to be used in lectures. The arithmetic mean for item 8 (*activities realised through the blog have contributed to advancement and development of knowledge acquired in lectures and exercises*), and item 3 (*activities realised through the blog have contributed to encouragement and development of inquisitiveness and the research spirit in students*) is 1.54 and these results are according to expectations.

The arithmetic mean for other items in the questionnaire shows that students have graded highly the achieved effects of introducing the blog as an innovative method. These results can be seen in Table 4.

Table 4.
Descriptive statistics

Items	N	M	Min.	Max.	SD
Use of modern information technologies (item 5)	37	1.46	1	5	0.96
Independent article writing (item 6)	37	1.46	1	5	0.8
Well organised blog contents (item 10)	37	1.51	1	5	0.8
Upgrading of acquired knowledge (item 8)	37	1.54	1	5	0.65
Independent topic selection (item 3)	37	1.54	1	5	0.93
Professor availability (item 7)	37	1.59	1	5	0.98
Additional elaboration of topics from lectures (item 2)	37	1.62	1	5	0.83
Development of inquisitiveness (item 1)	37	1.7	1	5	0.81
Development of inner motivation (item 4)	37	1.92	1	5	0.92
Activities in preparing and commenting on articles (item 9)	37	2.49	1	5	1.39

Furthermore, in the same research, we were interested whether there is a correlation between the ratings of blog use effects (per individual items) in Mental health classes and:

- average grade of all passed exams
- total number of passed exams, and
- average grade in the group of subjects belonging to the field of psychology (Developmental Psychology, Pedagogical Psychology and Mental Health)

The results are shown in Table 5, with statistical significance level $p < 0.05$

Table 5
Matrix of correlation

item	1	2	3	4	5	6	7	8	9	10	
Average grade of all passed exams	- 0. 2 4	- 0. 1 1	- 0. 2 1	- 0, 3 6	- 0. 2 8	- 0. 4	- 0. 1 5	- 0. 4 1	- 0. 1 1	- 0. 1 1	- 0. 1 5
Total number of passed exams	0. 1 6	0. 1 3	- 0. 2 1	- 0, 1 1	- 0. 1 7	0. 0 3	0. 0 8	0. 0 3	- 0. 2 1	- 0. 0 2	
Average grade of exams from the group of subjects belonging to the field of psychology	- 0. 3	- 0. 2	- 0. 3 4	- 0, 5 8	- 0. 3 2	- 0. 3 4	- 0. 4 2	- 0. 5 1	- 0. 2 6	- 0. 3 3	

Based on the acquired results, by observing the relationship between the average grades of all passed exams and ratings per item, we may conclude that there is a statistically significant correlation between the average grades of all the exams passed and:

- estimation that the activities realized through the blog have contributed to development of intrinsic motivation of students ($r = -0.36$); there is a slight tendency that the respondents who have a higher average grade agree more with this view;
- estimation that the students consider it useful to independently write the articles with the instructions and mentoring ($r = -0.40$); there is a medium tendency that the respondents who have a higher average grade agree more with this view;

- estimation that the activities realized through the blog have contributed to improvement and broadening of the knowledge acquired in lectures ($r = -0.41$), there is a medium tendency that the respondents who have a higher average grade agree more with this view;

In addition, based on the results (Table 5), and by observing the connection between the total number of passed exams and ratings of individual items in the questionnaire, we may conclude that there is no significant statistical correlation.

Also, based on the results (Table 5), and by observing the connection between the average grade from the psychological group of subjects and the ratings of individual items, we may see that there is a significant statistical correlation between the average grade from the psychological group of subjects and:

- estimation that the activities realized through the blog have enabled the students to independently select the topics which they will further work on, according to the subject and personal interests ($r = -0.43$); there is a medium tendency that the respondents who have a higher average grade from the psychological group of subjects agree more with this view;
- estimation that the activities realized through the blog have contributed to developing intrinsic motivation in students ($r = -0.58$); there is a medium tendency that the respondents who have a higher average grade from the psychological group of subjects agree more with this view;
- estimation that the students hold useful the independent writing of articles with the help of instructions and mentoring by the professor ($r = -0.34$); there is a weak tendency that the respondents who have a higher average grade from the psychological group of subjects agree more with this view;
- estimation that the activities realized through the blog have contributed to the availability of professors outside the regular lecturing and consultation hours (communication during writing, mentoring and posting of the article on the blog) ($r = -0.42$); there is a medium tendency that the respondents who have a higher average grade from the psychological group of subjects agree more with this view;
- estimation that the activities realized through the blog have contributed to improving and broadening the knowledge acquired in lectures and exercises ($r = -0.51$); there is a medium tendency that the respondents who have a higher average grade from the psychological group of subjects agree more with this view;
- estimation that the content of the blog is well organised; the search, reading and commenting is simple ($r = -0.33$); there is a slight tendency that the respondents who have a higher average grade from the psychological group of subjects agree more with this view;

All significant statistical correlation values are negative, because of the numerical values on the scale (answer 1: *I completely agree*, answer 2: *I partially agree*, answer 3: *I can't decide*, answer 4: *I partially disagree*, answer 5: *I completely disagree*), a lower score represents a higher degree of acceptance of the view.

CONCLUSION

Student textbooks and notebooks have been replaced by computers and new forms of electronic records. If letters and pictures are still the base of education materials, movement, or animation is the most obvious leap in quality in regard to acquiring new knowledge. While not so obvious, but much more important component is the speed of access to information and their near-unlimited availability. The Bologna Declaration indirectly points to the value and „visibility“ of information as a substantial component of higher education in the European zone. The Lisbon Strategy proclaims the need for: *employment, economic reform and social cohesion – the way to Europe founded on information and knowledge*, clearly indicating which values the modern world strives to. Innovative methods and raising the quality of education represent a part of the way to achievement of these goals, and by respecting these requirements the College is joining the European processes through participation in international projects and acceptance and implementation of the Bologna Declaration.

Herein conducted research, explained in detail, as a result of blog introduction in the process of teaching Mental Health, had the objective to present the achieved results statistically and precisely. Having in mind that the *product* of our efforts is a fully competent and thoroughly educated teacher, the estimation of quality and results achieved by introduction of this new method was entrusted to the students. The questionnaire analysis and results obtained revealed a high level of participant satisfaction with the applied method. Use of modern information technologies and independence in work were rated best and may be used as substantial data and direction for creation and modelling of teaching methods. Further research has shown a statistically significant correlation between the rating of effects of using the blog and the average grade of all exams passed, and the mentioned rating and the average grade of passed exams from the psychological group of subjects.

Satisfaction with the achieved results and the students' rising interest for the blog of the College, measured by the visitor statistics of the website, has ensured the continued use of this method in teaching of Mental Health. The presented results may serve other teachers as a stimulus to include modern information technologies for encouragement of student independence in work, which would

result in greater realization, efficiency and achievement of goals set in their subjects. This work has not dealt with *extracurricular* benefits of introducing the blog into the teaching process, such as the financial or ecological aspect of this method, though this opens up new opportunities for research and confirmation of validity of its use.

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