



COMPETENCY IN ICT OF STUDENTS IN “PRE-SCHOOL AND PRIMARY SCHOOL PEDAGOGY” – EDUCATIONAL QUALIFICATION DEGREE BACHELOR AND EDUCATIONAL QUALIFICATION DEGREE MASTER

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ABSTRACT

The present report deals with the problems of ICT (Information and Computer Technologies) in the higher pedagogical education. A questionnaire aimed at studying the opinion of the students in “Pre-school and Primary School Pedagogy” – Educational Qualification Degree Bachelor and Educational Qualification Degree Master has been used, determining their notions about the competency in ICT. The answers included also reflect the self-evaluation of the students about their readiness to use the technologies. On the basis of the received results, a sample profile was made of the components of the competency in ICT.

Key words: pedagogical education, primary school age, skills, didactic application of ICT

INTRODUCTION

In the last few years the topic about competency is a subject of pedagogical analysis. It has also been commented upon in the European referent framework, where key competencies are spoken about. The dynamics of the dependence of the pedagogical competency in the system of higher education demands the study of separate components. The subject of the present paper is competency in ICT of the bachelor and master students. The questions in the questionnaire are aimed at studying its separate components of the competency in ICT, according to the priorities of the Faculty of Education, stated in the curriculum documentation.

According to A. Hutorski: “The educational competencies are conditioned by the personal and activity approach to education. They are particularly concerned with the personality of the student and revealed and tested only in the process of performing a certain complex activity. The notion of competence includes the complex of interrelated qualities of the person (knowledge, skills, habits) which are

required in terms of a definite circle of subjects and processes and necessary for a quality productive activity, concerning them. Competence is command, possession of the person of the respective competence, including their own personal attitude towards it and the subject of the activity” (1).

Ten new competencies are defined, which are necessary to the contemporary teachers, among which “the use of the new technologies” is mentioned (2). Among the key components, enumerated in the European referent framework, the fourth place is that of “the digital competencies” (3)

G. Boneva defines the professional-pedagogical competence as a combination of characteristics, reflecting the knowledge, skills, habits and motivation for the professional realization (4). The present study is based on the belief that an important characteristic of that competence is the competency in ICT of the students. Its research is necessary for the justification of different variants for improving the curriculums in the disciplines connected with ICT. The results which are received will give an idea of the place of the technologies among the instruments of the future pedagogue and the personal self evaluation of the student,

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concerning his or her level of competence in that field.

TECHNOLOGY OF THE RESEARCH PERFORMED

In the framework of the project “Integrative characteristics of the professional-pedagogical competence of the students in “Pre-school and Primary School Pedagogy” – Educational Qualification Degree Bachelor and Educational Qualification Degree Master a survey was performed with students bachelors from the 4th course and master students in the 3rd semester. The opinions of 31 bachelor students from the 4-th year and 36 master students in the 3-rd semester were taken, all in the specialty “Pre-school and Primary School Pedagogy” at the Faculty of Education of Trakia University.

The received empirical data were analyzed according to the following criteria:

- notions and understandings of the students about the ICT competency;
- self evaluation of the knowledge and the practical skills of the students about the use of ICT in their pedagogical work;
- didactic application of ICT in the primary school according to the students;

- difficulties the students meet when using ICT;

In order to get information about the respective indicator, a questionnaire was used. The questions were chosen so that they give information about more than one indicator and also give an opportunity for checking the credibility of the information. The main questions asked are the following:

What do you think is meant by competency in ICT (Information and Computer Technologies) of the primary-school teacher?

How would you grade your competency in ICT and your readiness to use and apply the technologies in the educational process with students at primary school age?

Where would the use of ICT in the education of students at primary school age be most effective?

Where do you find difficulties when using ICT in the preparation for the school lessons in the primary school?

RESULTS AND DISCUSSION

The survey gives basis for the following statements:

Table 1. Firstly: Notions and understandings of the students about the ICT competency.

	Answers	bachelors	masters
A	Knowledge about ICT and their use	84%	75%
B	Skills for creating computer models and presentations for assisting the educational work of the primary-school teacher	97%	78%
C	Performing the whole process of education applying different ICT	48%	50%
D	Choice of software decisions, adjusted to the age and needs of the students from the primary school	45%	53%

The people questioned had the opportunity to choose between 3 answers. The most common combination of 3 answers was (A, B, D) – 42% of the interviewed bachelors and – 25% of the interviewed master students. These results indicate the well-realized understanding of the component parts of ICT among the bachelors and the masters.

The combination of 3 answers (A, B, C) was preferred by 31% of the bachelors and 22% of the masters. For most of the masters the competency in ICT also includes the realization of the whole process of education with applying different ICT, as most of them already have some pedagogical practice. A high

percentage of the answers pointed at the skills for creating computer models and presentations. This opinion of the students can be explained with the widely spread multi-media demonstrations of lessons and the use of the presentation as traditional means for leading lectures. Apart from that, the most common and traditional form of extra-curricula activity of the students in the other school subjects is the preparation of a computer presentation. Both of the surveyed groups realize that for the competency in ICT the pedagogues need not only knowledge and skills for the use of the technologies but also skills for choosing software decisions which take into consideration the age and the needs of the students from the primary school age.

Table 2. *Secondly: Self-evaluation and practical skills of the students for using ICT in their pedagogical activity*

	Answers	bachelors	masters
A	I have complete theoretical and practical preparation	45%	44%
B	I need additional practical preparation in ICT	55%	39%
C	I need to attend an additional course or work with specific software, intended for use in the primary school age		11%
D	I am not ready to use ICT in the educational process		3%
E	I cannot say		3%

Almost half of the interviewed people from both groups say that have complete theoretical and practical preparation for the use and application of the technologies in the educational process with students from the primary school age. 55% of the interviewed bachelors say that they need additional practical preparation in ICT, 39% of the masters say the same. What is striking is that

11% of the masters say that they need to attend an additional course or work with specific software, designed for students from the primary school. This means that they are able to make a more realistic judgment about their preparation and about the need for pedagogical practice and that they may choose an additional module for training which will improve their competence in ICT.

Table 3. *Thirdly: Didactic applicability of ICT in the primary school according to the students*

	Answers	bachelors	masters
A	depending on the components of cognitive knowledge – perception, realization, re-establishing, application	83%	50%
B	when developing the creative abilities and the imagination of the children	7%	26%
C	when realizing the interdisciplinary links in the study of the different school subjects	23%	26%
D	when establishing ICT as a separate discipline	3%	15%
E	I cannot say	3%	9%

The answers to this question give an idea of the vision of the students about the educational process, through the use of the possibilities provided by the ICT. Their evaluation about the effective application of the technologies with students from the primary school age is also seen from this table. A high percentage of the bachelors point out the good possibility of applying ICT in the components of cognitive knowledge – perception, realization, re-establishing and application. Their theoretical

competence in the academic course of education is the reason why they make this choice. According to the answers they give - 23 % are for the realizing the interdisciplinary links in the study of the different school subjects. With the masters 26 % have pointed the place of ICT when developing the creative abilities and the imagination of the children. This difference may be explained with the deeper knowledge of the pedagogical practice.

Table 4. *Fourth: difficulties the students meet when using ICT.*

	Answers	bachelors	masters
A	when using effective ways of searching and selecting information from the Internet	21%	27%
B	when choosing suitable software decisions for the primary school age	38%	33%
C	when designing presentation materials for the lessons in the different school disciplines	10%	33%
D	when finding a suitable place of ICT in the cognitive school process	14%	30%
E	I cannot say	34%	30%
F	I do not have difficulties	3%	3%

This question is a kind of a reference to the question about self-evaluation of the knowledge and skills for using ICT. From the given answers it is obvious that, in spite of the self-confidence and the high evaluation of the students, there are some difficulties the students meet when using ICT. The pointed difficulties are of different character, about one third replies that they cannot say where the difficulties are. The reasons can be in the huge amount of freely structured information in the Internet which makes it difficult to find the suitable, the useful and the important. The choice of suitable software decisions for the primary school age is found difficult for both groups of students, which proves the importance of this component of competence in ICT. The skill for finding a suitable place for ICT in the cognitive school process is an obligatory part of the competence in ICT of the primary school teacher. The students look for stable models for their activity when choosing suitable software decisions.

CONCLUSION

The fast developing media of information technologies creates a dynamic idea of the competence in ICT. Judging by the survey, the conclusion can be made that the notions of the students encompass many competencies. Apart from the necessary basic knowledge and skills for using the technologies, the competence also includes special professional requirements, which can be ranged in the following profile:

- Skills for creating computer models – interactive presentation;
- Skills for choosing suitable software decisions - multimedia programmes for the primary school age;

- Skills for selection of information from the Internet and its adaptation to the needs;
- Skills for finding a suitable place of ICT in the cognitive school process in different branches;
- Skills for using the ICT in support of the individual cognitive process;
- Skills for using ICT for developing the creative abilities of the children at Primary School.

ICT have unquestionable potential but their inclusion in the educational process demands preliminary preparation on the part of the future teachers which will make it easy for them to structure and choose the decisions, suitable for the Primary School. In order to achieve the competency reflected in the questionnaires, it is essential to enrich the school curricula of the disciplines connected with ICT with additional topics directed to the interactive use of the technologies.

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