



Original Contribution

NECESSITY FOR CHECKING THE ENTRANCE LEVEL AT INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) OF STUDENTS OF EDUCATION

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ABSTRACT

The article outlines the role and place of information and communication technologies (ICT) in the education of students of the following specialties: Pre-school and Primary School Education and Primary School Education with a Foreign Language in the contemporary reality. The reasons are been sought for the differences in the education of the students in ICT when entering the Faculty of Education, as well as the negative consequences from their theoretical and practical gaps. The analysis gives an opportunity to justify the necessity for checking their entrance level on the basis of the curricula in information and communication technologies (ICT) in the secondary school. This check needs to be done on the basis of specific important topics which are necessary for their academic studies.

Key words: students of pedagogy, testing, level of knowledge in ICT

INTRODUCTION

1)Place and importance of ICT in general.

The increased quantity of information and the increase of the information influxes are analyzed, as well as the key competences in the European referent framework, ICT supporting the realization of the strategy for lifelong learning and ICT for supporting the developing new methods of teaching.

2)ICT competences in the higher pedagogical education.

The places are pointed out that require the use of ICT competences: the performing of tasks from the extra curriculum activities in the credit accumulation, the obligatory study of the school subject Audio visual and information technologies in education (AVITE) in the pedagogical specialties; the programme Obligatory Chosen Subject Information Technologies 1-4 class; permanent search of a suitable place of ICT in the future practical training of the students.

3)Need for testing the entrance level of ICT of the students of pedagogy.

Analyzing the effect of the fact that more and more people enter the higher education and the gaps in ICT that are found out and that accompany the students in the whole cycle of education; receiving of a clear idea of the entrance level of ICT; giving insights to the students about the fields in ICT that will be used and will have considerable presence in the course of their education.

PURPOSE OF RESEARCH

The purpose of the research is to justify the necessity for checking the entrance level of ICT of the students in pedagogy. The result of the check will give an orientation point and will help the activities for the overcoming of the gaps and compensating the differences in the levels of their preparation from the high school.

RESEARCH METHODS

Theoretical analysis, observation

RESULTS AND DISCUSSION

1.Place and importance of ICT in general.

The mastering and the effective use of the increased volume of information are unthinkable

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without the mastering of ICT because they speed up the collection, the storing, the processing, the dissemination and the use of the increasing influxes of data. The computers and the telecommunication means increase the analytical opportunities of man and are an indispensable part of the daily life of people from different professions.

Among the key competences, enumerated in the European referent framework, the fourth place is given to the “digital competences”. They “include the skillful and correct use of the electronic means at work, at leisure and with the purpose of communication”, “knowing the main computer programmes and the opportunities they give, skills for their suitable usage” (1). Each Bachelor programme has a universal and a professional function. In the field of the universal function are the digital competences. They are the basis for the forming of the transferable skills of the Bachelor degree.

In the report of the European committee regarding the use of the information and communication technologies in the support of innovations and lifelong learning for everyone it is said that new and innovative pedagogical and didactic approaches are needed. They must take into account the future study, social and professional needs for skills and competences, as well as the dynamics of their development. They are needed for work, self-development and participation in a society based on knowledge. ICT should be regarded as a key instrument for modernization and improving all aspects of education and training.

ICT should support the development of new methods of education. That is underlined in the report “Study and innovativeness through information and communication technologies in the European school - 2011”. Its focus is “directed towards the importance of ICT for the collaboration in the development of new methods of education”. It ends with an evaluation of the important role which the information and communication technologies have for the forming of skills for the 21st century. The necessity is pointed out for “the instruments of the new technologies to turn effective and co-existent with education” (2).

2. ICT competences in the higher pedagogical education.

The European system for transfer of credits (ECTS) is “a system for accumulation and transfer of credits” (3), which are digital expression of the attendance (lectures, seminars, etc.) and the extra-curricular activities (individual work, self-study and other forms of testing, training, etc.) during the study. In the course of their academic preparation the students receive tasks for their extra-curricular activity connected with the search and choice of information, presenting of the information in a suitable way, according to certain requirements given by the lecturers. The solving of these problems and their accompanying school activities are inevitably connected with the use of ICT.

The subject Audio visual and information technologies in education have been in the curriculum for the training of teachers in the educational degree Bachelor in the higher education institutions since 1997. It presents a part of the professional qualification of the teacher and directs towards a concrete field. The content of the subject has two fields – specific and technical (digital), which presupposes the necessity for “a whole conception for the levels of preparation of the students for integration of ICT in the course of their education at the university” (4). The readiness for integration means that the students should have a guaranteed basis as regards their basic training in ICT.

“The national strategy for the implementation of information and communication technologies in the Bulgarian schools” (5) takes into consideration not only the delivery of the technology but also the training of teachers in the pedagogical technologies, based on ICT. The contemporary school is awaiting teachers who are well prepared and who can transfer their ICT competences in opportunities for didactic interpretation of the school material from specific fields. For them, it is necessary to look for ways for using the technologies as an instrument for organization and managing the process of study.

The school programme Information Technologies 1-4 class is successfully implemented in the schools where the problem with computer rooms and teachers has been

solved. Most of the children at this age use computers and internet and it is only natural that they get training in ICT. For the future primary school teacher it is a new challenge for mastering additional competences in the field of the methodology of teaching information technologies to students from that age group.

3. Testing the entrance level of ICT of the pedagogical student.

One of the radical changes in higher education is caused by the current tendency towards its becoming more and more popular. This is defined by the orientation and the willingness of more people of different ages and different qualification to become consumers of education offered by the universities. The contingent of the students is becoming more various and this presupposes reconsideration of the aims set by the curricula in the direction of establishing and attempting to unify the level of competences when they enter the university. The different curricula and programmes used in the high schools are the reason for the inadequacies between the expected results and the reality at the entrance of the higher institution. The observations which have been done lead to following conclusions:

- The students enter the university at different levels of theoretical and practical preparation.
- Attempts are made for overcoming the differences but without taking into consideration the concrete gaps of the different students (sometimes the topics of the high school are covered again, other times some material is omitted with the presumption that some facts are clear by themselves).
- The gaps continue to hinder the process of effectively using the ICT during the process of education for the bachelor degree. The students do not get specific directions for dealing with the arising problems.
- In most cases the options for using ICT are used chaotically or the method of trial and error is used.
- A great part of the activities connected with the gathering and processing of information are not automated, as a result of which the students lose time and resources for routine technical activities and do not manage to keep the deadline for the tasks or do not initiate the

necessary creativity and individuality in the process of performing the course projects.

- There is a search for already created products (for example by other students), which to some extent meet the requirements for the given tasks and are presented as new, while in most of the cases there is not the necessary critical view because of the lack of understanding for the materials and activities used.

In the ITC seminars at the Faculty of Education a considerable part of the material covers that of the high school and the accent has to be in the building up of knowledge and skills leading to forming competences. A considerable part of the gaps remain and the students not only do not realize that but also the negative consequences for their future activities. They multiply their mistakes to the end of their education and are left with a deficit of basic skills in ICT. This does not give them a chance to develop those skills themselves in the direction of their future pedagogical practice. It is necessary that the information culture of the students is seen during their education and that it is accumulated through efforts for filling in the gaps.

A detailed check of the knowledge and skills of the students is needed to establish the level of the theoretical and practical training during high school, received from qualification courses or individually. For the purpose it is necessary to analyze the curricula for the 9th and 10th classes in ICT. This will show what needs to be there as a result at the exit from the education in the different modules and what needs to be tested. The detailed analysis of the level of competency in ICT of the students at the beginning of the education will give a real idea of how it should continue. The activities involves for the overcoming of the differences, the unifying of the levels and the filling of the gaps should be such as to make the level at the exit from the high school enough for entering the higher institution and adequate for the university teaching.

The skills of the students for finding the right place of ICT and their effective use are directly connected with their basic skills. If we accept that the pedagogical skills for using ICT in the process of studying are a natural continuation of the basic ones in the direction of forming

professional competences, we need to be positive that a stable foundation has been created for their effective building up. That check will be very useful for the students and will give them an orientation point for the fields of ICT which they will build upon in the course of their education in the bachelor degree.

The research aims at developing a complete and exact idea of the entrance level of the students. Mechanisms will be used for the permanent following and adequate development during the study of ICT at the Faculty of Education.

Analysis. The analysis of the curricula for ICT at 9th and 10th classes will show what the programmes are aimed at the exit of the education. Through the choice of suitable and important topics and parts of them, tasks will be compiled and questions for diagnosing the entrance level and finding the accents for the course of university education.

The content part. For performing the check, materials will be used which are independent of the media (version, application, etc.). They will check basic notions, which are not directly connected with the concrete interface. They will measure skills for recognizing of situations and the choice for suitable technologies for work, as well as the existing competences for work with different technologies. The practical skills will be defined by means of tasks of levels of difficulty that will measure the degree of mastering. In this way, not only a check will be made but also the students will adapt their basic skills to the new pedagogical environment. In that environment they will create and develop their professional competences.

Participants. The research will include a representative sample of the students, arranged and selected by different criteria: age, year of graduation, type of school, classes in ICT, assessment in ICT and others.

RESULTS

The results of the analysis of important themes drawn from ICT and materials for inspection will be a basis on which a model will be created that includes tasks and technology for work. We expect that the result of applying the model will create a tool that makes it possible to check the level of ICT and a strategy to upgrade knowledge, skills and competencies, according

to the specifics of training in the pedagogical specialties.

CONCLUSION

If we have successfully checked the level and established the style of work, then the discipline Audio visual and information technologies in education (AVITE) will have transferred ICT skills that are automated and allow detailed insight into the pedagogical aspects of IT. This training is a sound basis for inclusion of new items and skills. They will expand the range of opportunities for acquiring a more independent way of getting additional competencies to use ICT in teaching students from elementary school age.

For the different areas of knowledge the digital competence has different dimensions. For pedagogical students it is necessary to create and provide conditions for a successful transition from individual basic ICT skills to an integrated process of development of computer competencies related to their future subject areas at primary school age.

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