Reflection on the Development of eLearning in the Czech Republic

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Abstract: - The paper describes the development of eLearning concept in the Czech Republic, particularly at the Faculty of Informatics and Management of the University of Hradec Králové. Furthermore, it reflects on its benefits and constraints for the educational process and highlights its changes thanks to the development of ICT. Finally, it briefly discusses effectivity of eLearning in teaching.

Key-Words: - Internet, Educational Software, Web-Based Education

1 Introduction
Modern information and communication technologies (ICT) have penetrated all spheres of human activities including education. Moreover, at present ICT have become an integral part of everyday learning. Much has been also written about their use in a learning process (see Balogh [1], Davis [2], Fitzpatrick & Davis [4], Frydrychová Klímová [5] or Hubáčková & Růžičková [10]). The following Table 1 demonstrates how ICT have generally changed traditional approaches to teaching and learning.

Table 1. The transformation of education [14]

<table>
<thead>
<tr>
<th>Traditional approach consists of:</th>
<th>Technology allows more of:</th>
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<tbody>
<tr>
<td>Teacher-centered learning</td>
<td>Student-centered learning</td>
</tr>
<tr>
<td>Mass instruction (one size fits all)</td>
<td>Mass customization with instruction to fit individual student needs</td>
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<tr>
<td>One pace applies to all students</td>
<td>Flexible pacing based on student abilities</td>
</tr>
<tr>
<td>Classroom and school building</td>
<td>Distributed learning possible from any place</td>
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<td>Learning during school hours</td>
<td>Learning at anytime</td>
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<td>Facts and recitation</td>
<td>Critical thinking in real-world contexts</td>
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<td>Individual student performance</td>
<td>Collaboration and dialogue among students and between students and teachers</td>
</tr>
<tr>
<td>Textbooks</td>
<td>Up-to-date primary information resources</td>
</tr>
</tbody>
</table>

Perhaps, the most common form of learning with the help of ICT at educational institutions is eLearning. There exist a number of abundant definitions. The eLearning Action Plan [23] defines it as the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration. Wagner [25], for example, defines it as the educational process which uses information and communication technologies for designing courses, distributing the learning content, for teacher-learner and learner-learner communication and managing the whole process. As it can be seen from the definitions, they both put an emphasis on the educational component of eLearning. However, it was not always that case. Originally, the technological component was preferred (cf. Květoň [12] or Korviny [11]). The whole transformation and development of the perception of the word eLearning and its concept has been most recently described in the Czech Republic by Šimonová [20].

2 eLearning concept

eLearning has become an irreplaceable part of the educational process not only at universities, but recently also at basic and secondary schools. According to Marsh, McFadden & Price [26] there are several modalities of eLearning:

- presentations of lectures
- placing e-course syllabi at WWW
On the other hand, there exist certain risks which might contradict with the above mentioned statements. From the personal point of view these are:

- a lack of personal contact, that is particularly true for language teaching,
- problems with technology,
- time-consuming and demanding for creation and preparation,
- study materials available only in an on-line form,
- sometimes inconclusiveness of feedback,
- absence of emotions which need to be vented,
- students’ reluctance to study on their own,

From the institutional point of view, one can list the following pitfalls:

- not a sufficient access to technology,
- high financial costs,
- a necessity to determine a ratio between the face-to-face and distance classes,
- problems with the guarantee of education of good quality,
- demanding for preparation,
- a need to evaluate an impact on students,
- problems with the connection to the Internet.

3 Impact of ICT on the educational process

Nevertheless, nowadays eLearning and the distance education have become a standard form of learning in the current educational system in the Czech Republic and most of the above mentioned issues have been solved (e.g. a ratio between the face-to-face and distance classes or higher financial costs). A decade-taking process of ICT implementation into the process of instruction at Czech universities ran into three steps, and both learners and educators were concerned. Receiving general computer literacy followed after providing hardware and software equipment; the process was completed by developing didactic competences so that a great deal of ICT potential could be exploited in the process of instruction.

Moreover, it seems that both students and teachers are well equipped with enough digital skills. Consequently, their roles in the educational process have altered. In the eLearning courses a teacher is a student’s partner. S/he is a kind of coach, moderator, facilitator, mediator or tutor in

- web-assisted courses
- distance education
  - synchronous
  - asynchronous.

This categorization clearly describes the ways of eLearning implementation at universities. In the beginnings of the implementation of eLearning, distance education was rare and presentations of lectures were quite common since they replaced the overhead projector and the data projector and computers started to be used instead (cf. Poulová [15]).

Many articles have been written about the exploitation of eLearning and its impact on users, particularly at the Faculty of Informatics and Management of the University of Hradec Králové since the faculty can be considered a pioneer in this field in the Czech Republic (see Poulová [18], Frydrychová Klímová [5], Šimonová & Bílek [19]). Another reason of its successful implementation into teaching and learning is its positive contribution to learning results, which is given by its advantages. In comparison with the traditional, face-to-face classes, the advantages of eLearning from the personal point of view might be as follows:

- easy access to study materials,
- easier updating of study materials,
- further access to additional materials,
- individual pace, time and place of studying,
- almost immediate feedback,
- modern way of teaching,
- teacher could be absent, therefore if s/he is ill, classes are possible,
- chance to practise more and verify one’s knowledge,
- more opportunities for communication (such as a use of discussion tools) and consequently, more electronic consultations,
- support of teamwork,
- chance to submit assignments and their almost immediate evaluation,
- attractivity and dynamism of the on-line study material.

Advantages from the institutional point of view:

- support of distance learning,
- higher motivation and stimulation for students,
- higher prestige of the institution,
- standardized tuition and teaching environment,
- smaller demand of computers in the traditional classes.
order to help students to overcome obstacles so that they can achieve their learning objectives. For more information and survey results on the tutor’s and student’s role in the eLearning courses, see Poulová & Frydrychová Klimová [17]). Thus, on the one hand, there is a teacher who should act as an advisor or a facilitator, on the other hand, there is a students who ought to take on responsibility for his/her learning (Fig. 1).

Fig 1. Changing roles in the educational process

In 1990’s with an arrival of new technologies and consequently, with a much faster acquisition of knowledge, teachers started to look for more suitable methods to exploit both student’s language knowledge and skills and their computer skills. Furthermore, they begin to realize that students can use the Internet to retrieve the information they need for learning. However, on the other hand, they must be very careful and know how to process and interpret the provided information. In a word, they must cognitively evaluate it. And this is the moment when teachers and/or students can collaborate with one another. Moreover, such an approach to teaching when students construct new knowledge based upon their prior learning and experience is called Constructivism. Constructivism is a theory of knowledge that argues that learners construct knowledge from their experiences, both positive and negative. According to this theory, learning is an active social process, which means that learning occurs when individuals are actively engaged in social activities (compare to Vygotsky [24] or McMahon [13]). Constructivism regards a learner as a unique individual, considers his/ her cultural background, or supports the responsibility and motivation for learning. Therefore, Constructivism perfectly suits any learning.

In such a learning process students should posses the following skills:
• they should be more independent and autonomous;
• they should be more responsible for their learning;
• they should be eager to seek for knowledge and broaden their horizons;
• they should critically assess, evaluate and produce reliable information;
• they should reflect on their achievements and learn from them;
• they should collaborate/cooperate and interact with other mates in a learning process;
• they should not be afraid and try to put their message across even though they are aware of some mistakes they make;
• they should not be afraid of taking risks with new technologies;
• they should be tolerant and empathetic to other cultures.

And if teachers and students are then equipped with such skills as described above, then learning with the help of ICT might be as follows:
• learning concentrates rather on the learner than a teacher;
• learning becomes more personalized;
• learning becomes on the one hand more independent, on the other more collaborative and interactive;
• learning can happen at any place and any time;
• learning is enriched with more up-to-date materials, which can be tailored according to student’s immediate needs;
• thanks to multimedia activities, learning becomes more varied and dynamic;
• learning requires critical thinking;
• learning becomes more culture conscious;
• in addition ICT in FL learning improve students’ listening (cf. Hubáčková [9] or Houcine [8]), reading and writing skills (cf. Frydrychová Klimová [6]).

Finally, at present the key issue of eLearning is its effectiveness for the educational process. Does it really suit teacher’s and student’s needs? Does it match different learning styles? These are some of the core questions which are being solved by experts in this field in the Czech Republic at the moment.
(cf. Šimonová et al. [22], Šimonová & Bilek [21], Poulová [16]).

4 Educational process and its effectiveness

As Poulová [16] states, the effectiveness of the educational process is given by many factors, e.g. learner’s intelligence, level of knowledge, motivation, self-confidence, and learner’s cognitive and learning style. Teacher’s teaching style and the matches/mismatches with students’ learning styles influence the efficiency of the educational process to a large extent. Some authors (Felder and Silverman, [3]) say (instead others) that mismatching can cause further educational problems. It favors certain students and discriminates others, especially if the mismatches are extreme. On the other hand, if the same teaching style is used repeatedly, students become bored (Gregorc [7]). The process of instruction supported by ICT may become suitable and beneficial for learners of various styles. The reason is it offers a wide range of tools and activities which can be tailored to any learning style and used by any teaching style instructor. The possibility to individualize the educational process from the both students’ and teachers’ point of view belongs to valuable advantages of eLearning (Šimonová et al. [22]). However, these are issues which still need to be further investigated and evaluated in order to increase the efficiency and effectivity of eLearning in the whole educational process.

5 Conclusion

In conclusion, both theory and practice show that learning is a complex process, dependent on the understanding and expertise of the individual tutor/teacher faced with the individual students with their different learning needs and strategies. Nevertheless, ICT, if they are exploited accordingly with these demands, definitely contribute to the improvement of the quality of the educational process.

References: