THE OPPORTUNITIES OF EDUCATION IN DISTANCE LEARNING MATERIALS

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Abstract

In this essay we are going to investigate the potentials of distance learning materials from an educational point of view. We will make an attempt to examine the opportunities of education using distance learning and computer. We will do this through two authors' different ideas about education. We will highlight the features that are fundamentally different from the features of traditional education. We will show the technical limits that make it impossible to achieve certain educational aims and we will call the attention to the fact that while we concentrate on the content of the distance learning materials, their educational sides are neglected.

Keywords: education in distance learning, distance learning materials, professional socialisation using multimedia materials.

1. Introduction, Aims

This essay aims to illustrate the opportunities for achieving our goals in a distance learning situation, where teacher and student are separated and they communicate with each other only by means of one or more media (CD-ROM, telephone, e-mail, web). In this text we will principally deal with information carrying systems in multimedia such as CD-ROMs and the Internet.

The justification of this topic is that although we put enormous emphasis on the development of the methodology and content of our distance learning materials, their educational sides have not been investigated much yet. A very probable reason for this is that these materials are designed for adults and for young people already out of school, and since this age group is said to be 'uneducatable' we do not pay much attention to it. But I do believe that since with every teaching activity we also educate, imperfect multimedia materials can do harm to students' personality and to the professional socialisation process as well (i. e. the acquisition of the rules of the profession to be learned).

Besides, it is inevitable that multimedia teaching materials get into public education, because it is not enough to develop children's computer skills in the Computer Science lessons only (especially not since their main aim when using

the computer will not be to look for or use computer science materials, but rather to collect and organise economy, literature or natural science related information). An example to this is the English National Curriculum, which prescribes the use of computer programmes in all of its subjects. Another example is the evergrowing group of web-sites that help learning and which are accessible to anyone (even in Hungary) through the Internet.

2. Education Principles, Potentials to Achieve the Aims in the Traditional System

In the traditional educational situation (where teacher and students are in the same room and students work individually or in smaller or bigger groups) interaction and communication are the main means of achieving the educational aims (BÁBOSIK, 2000). Two questions arise in all educational situations:

- which are the educational values we want to convey?

- what are the ways to convey them and how effectively can we convey them?

To define the educational values we want to communicate we can consider traditional education and distance learning to be the same. Supposing that distance learning also involves education [1], the principles, behaviour models to convey are the same as in the case of traditional education.

However, the ways to communicate these values are very different in these two systems.

In the traditional system it is the teacher himself who educates with his whole behaviour, teaching method and verbal or non-verbal devices. He uses direct and indirect teaching methods intentionally, subordinated to the educational aims. As opposed to this, when using multimedia teaching materials the teacher is not present, he can only try to achieve his goals through some kind of medium. This limits the teacher's opportunities since he cannot use his traditional communication channels. However, it is important for the student that while using the materials his personality should develop and adjust to the characteristics of the newly acquired system (or profession). The situation is most similar to the role of a textbook writer who intends his book to be used individually, although in this case individual study is preceded by some personal introduction to the topic (perhaps at school).

Two functions of education can clearly be separated in distance learning. The *general educational aims* (that prepare students to socialisation) are not as strongly marked as the aims necessary for *professional socialisation*. These latter aims should not fade away, because there is no (or little) personal contact in the process. Distance learning materials must pay as much attention to characteristics inevitable for perfect professional training as traditional supplementary materials.

2.1. General Educational Principles

Which are the generally accepted educational aims and principles that teachers have to adjust themselves to? According to Pál RÓKUSFALVY the base of human ethics is the approval of life and the world. This approval is predestined in our personality and it determines the educational aims of pedagogy (RÓKUSFALVY, 1999 a). According to him the major aim of any pedagogical activity is to raise the child's personality to its greatest value.

Next to the importance of ethical and moral development, István BÁBOSIK highlights socialisation as the second most important element of education. He introduces an eight- element list of the most important aims of socialisation (BÁBOSIK quotes FEND, 2000):

- self-leading ability of the personality
- sense of reality
- rationality – the ability to explain one's own behaviour
- sensibility – towards others
- creativity – to improve forms of behaviour
- social extensiveness – to the general use of forms of behaviour
- relativity – ability to find the way among different standards
- suitability to examine the legitimacy of forms of behaviour

Both authors agree that the teacher's picture of the ideal man is one of the most important factors that determine education. This picture determines every action and interaction of the teacher.

2.2. Elements of Professional Socialisation

The elements of professional socialisation differ from profession to profession; they are not universal moral principles. They rather help young professionals acquire certain norms during studying theory so that they can start their practice 'armoured' with this knowledge (typical to the profession). For instance, someone in the catering profession has to practise how to deal with guests and has to internalise the moral principles connected with the job. He also has to develop proper communication with the cooks and, all in all, he has to develop a proper conduct towards the job and what it involves. Even a phone sales assistant has to acquire moral norms that are vital for them to do the job well.

3. Education Principles, Chances to Achieve Aims in Multimedia Environment

3.1. Limits Originating from the Use of Computers

The potentials of multimedia materials stored on CD-ROM or on the Internet are limited. The limits chiefly originate from the transmission bandwidth. This means a problem when we want to play movies stored on CD-ROM, because the rotation speed of the CD (and the performance of an average computer) is not sufficient to play movies with the desired length and quality. When we use pictures from the network even the use of still pictures or sounds can be problematic, although by now it is possible to buy fast equipment cheap. A 33.6 kbit/sec modem, which is considered common today, can play sounds and pictures in real time in acceptable quality (e. g. with 'real media softwares').

Technical problems mean extreme danger when designing multimedia materials, because designers and manufacturers choose devices that are only satisfactory but not optimal to convey information. They often do it to minimise expenses. Using texts or still pictures is always cheaper than making movies in sufficient quality, especially when a special software (e. g. the server-side programs of the real media systems) also has to be bought to store motion pictures on CD or to make them accessible on the network. These commercial software products allow designers to overcome the difficulties of hardware problems. This is how technical limits often hinder us in choosing the ideal medium.

3.2. The Indirect Problems Arising from the Use of Computers

The most important indirect disadvantage of using computers is the problem of being impersonal. The absence of the teacher prevents personal modelling, evaluation on the spot and feedback. Because of this the teaching process becomes impersonal and in the case of imperfect teaching materials it can also become uncontrolled.

The distance learning systems of today try to compensate for this by regular (compulsory or voluntary) consultations. But the rare personal meetings only provide opportunity to convey some elements of professional socialisation – it is not possible to achieve the general educational aims in these situations. In fact, the teacher is indispensable in the case of distance learning materials, we can only make attempts at his replacement.

Such an attempt is made when materials are personalized. Multimedia materials that have many ways for it allow the student to proceed in the material at his own pace – i. e. so that he can make the most of his individuality. This personalization (or differentiation of content) is often absent even in the traditional teaching situation. The teacher deals with more people at the same time, so during the teaching process he has to define a certain level of knowledge that he will adjust to in his teaching. This level will not suit all students, from which we can conclude

that distance learning materials have a better chance to help personalize teaching.

The computer as a mediator of knowledge is probably most similar to the use of conventional textbooks. BÁBOSIK says that according to the restrictive definition of the system of pedagogical tasks the function of textbooks is merely to pass on knowledge (BÁBOSIK, 2000.). But he thinks that according to the modern interpretation of the system of pedagogical influences textbooks also have to fulfil some other functions such as socialisation and a role that has an effect on the social and the educational process. From this point of view the choice of texts, pictures, examples and exercises – which influence the formation of the student's personality – is not a secondary issue (even though they belong directly to content development). This is also true for multimedia teaching materials, so one has to be careful when compiling the different parts of the syllabus.

Pictures, motion pictures taken in the streets, sounds recorded in nature always contain random non-intentional elements (e.g. objects in the background of a photo or background utterances in the case of recordings, which were not intended to be there). These elements get into the syllabus without the designers' notice. Although they seem to be unimportant (they are not part of the topic) they influence the personality of the learner. This problem has utmost importance since many say that during individual study on the computer students tend to pay too much attention to subsidiary things like a person or object standing in the background (KOVÁCS, 1995.).

Achieving our educational aims can also be hindered by the fact that students' computer skills are not on the same level. This means that some people can lose their way on the too complicated user interface, and since they do not use the computer in a skilled way, little direct and even less indirect information gets through to them.

3.3. The Concept of Education in Distance Learning Materials

The educational aims defined by Pál RÓKUSFALVY and István BÁBOSIK will serve as a basis to investigate which educational goals can be achieved in distance learning materials.

According to Pál RÓKUSFALVY: 'only those can educate who are developing people themselves'. In this sense multimedia teaching materials are unable to educate. But he also says that education means two things:

- stimulating and guiding activities that result in development and
- securing the environment that helps development.

Well-designed multimedia syllabuses can meet these criteria almost perfectly. Personalised distance learning materials can in many cases serve the stimulation of activities that result in development better than traditional environment: it motivates the student because it fits his abilities and the student can follow his own pace. By using multimedia materials (as opposed to the traditional system) the student can

experience more sense of achievement, more positive feedback because the tasks are fit for his abilities and the pace of progress can be necessarily slow.

If we accept that the virtual environment simulated by the computer is also important from the educational point of view, then a well-designed material can establish a developing environment which is better and more efficient than the traditional one. The material writer can choose from a whole range of rules, he can borrow an appropriate amount of necessary rules to establish a more motivating simulated environment. For instance, students in physics lessons keep neglecting the effect of friction and air resistance while these conditions are impracticable in their experiments. It cannot be denied that a program cannot reproduce the developing human environment [2]. It is this defect that the distance learning teacher has to make up for by keeping in touch with the student on the phone or on e-mail. It is also because of this defect that personal meetings have special importance. Even according to students these meetings are significant elements of distance learning (KOVÁCS, 1995.).

It is even more difficult to meet István BÁBOSIK's requirements than those of Pál RÓKUSFALVY. In his concept not the establishment of a system of moral rules is the most important element of education, but achieving certain aims in social-isation, so he uses concepts that are more difficult to handle in our investigation. According to him the final objective is the common activity and the development of individualism within this, this is why he uses aims of socialisation that cannot be interpreted when we talk about individual learning.

However, when evaluating pedagogical work at school, he defines a three-element structure which can be used and supervised even in the case of multimedia materials. According to this structure the effectiveness of education [3] depends on whether

- the material has a picture of the ideal man
- the main characteristics of this ideal man are clearly defined and if they are socially relevant
- these characteristics to develop are present in the material and if the indirect appearances really help the formation of the characteristics mentioned.

BÁBOSIK defines this picture of the ideal man which we have to develop in the following way: 'the significant features of this ideal man are autonomy, altruism and moral consciousness...' These features are the ones that according to him schools and distance learning materials have to communicate. A well-designed material can possess these features and these statements can be examined by means of content analysis. The method of examination is still undeveloped but it can give a chance to measure the educational effectiveness of distance learning materials.

Based on the ideas of both authors we can say that the most important educator is man, and in the case of distance learning the material designers (who are respon-sible for education and content) and the consultant who meets the student regularly. We have to see it clearly that the means of education in this case is the multimedia storing device, the material played on the computer and because of this the basic

feature of this kind of education is that it is indirect and mediated. Indirect, because the educational aims are present indirectly, without personal contact between the teacher and the student, and mediated, because the material can be present at many places at the same time, without being altered.

3.4. Practical Questions of Education in Distance Learning Materials

While preparing distance learning materials we have to pay attention to the features that serve general educational aims, because these aims can influence the student's opinion, behaviour, socialisation and personality. These are not typical only for distance learning materials, they have to be carefully dealt with when preparing any kind of supplementary materials. These are the quality, versatility and language of the material.

The quality of the material is the factor that stands in place of personal modelling, especially in professional education, for in these cases the teaching material is the primary professional mediator so this is the most important thing that shapes professional socialisation. This means that the quality of distance learning materials is of utmost importance. They must have excellent pictures and language since the student sees and acquires the features of the material as the features of the profession.

It is the variety of the material, pictures, tasks and media that make the teaching material interesting and useful. Without this the teaching material cannot reach its goal; boring texts will not motivate students to learn, so the educational aims will be lost.

The language of the distance learning materials is important for the professional socialisation, since the student has to learn the special expressions to be used later during the learning process. Because of this we have to put special emphasis on the exact but professionally correct wording.

4. Conclusion, Summary

The theorem that all elements of the educational situation have an effect on the professional and personal development of the student is indisputable. As in the case of distance learning the distance learning materials are the most important means of conveying information, their educational role is highly significant. Because of their limited tools it is more difficult to achieve our educational aims through them than in a traditional teaching situation, through traditional communication tools. In this situation, using this limited system of tools, the task of the developing teacher is harder, because he has to use the elements of a new system to communicate traditional values.

5. Notes

1. According to RÓKUSFALVY 'all actions of the teacher, his whole personality influence the personality of the child, regardless of whether he wants it or not' (RÓKUSFALVY, 1999b, p. 48.). Generally speaking the teacher influences the student even if he is not present, when the student uses the materials compiled by him.
2. Although in theory it is possible to create artificial intelligence that can understand a natural language and control the whole learning process, it is in fact doubtful that a system lacking the complexity of human intelligence could substitute the teacher.
3. It is important to mention that BÁBOSIK writes about the effectiveness of school education, he does not mention distance learning materials.

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