

## EDUCATIONAL TECHNOLOGY IN TEACHING FOREIGN LANGUAGES AT UNIVERSITIES

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*The information and communication technologies have become an inseparable and inevitable part of our life. A continuous development of society and changes on the market are also reflected in higher education. The increasing number of university educated professionals focuses on modern educational forms and methods out of which electronic education belongs to the most important. Its use has a motivating effect on students because it differs from traditional form of teaching. The paper aims to describe the effectiveness of the use of modern technologies and e-learning in teaching foreign languages.*

**Key words:** *information and communication technologies, electronic education, the Internet, modern technologies, computer*

### **Introduction**

The ongoing scientific and technical progress brings us new possibilities for using different technologies for various areas of social life. Electronic education offers a wide range of uses of advanced information systems and technologies.

Educational technology is a systematic and organized process of applying modern technology to improve the quality of education. It is a systematic way of conceptualizing the execution and evaluation of the educational process (learning and teaching and help with the application of modern educational teaching techniques). It includes instructional materials, methods and organization of work and relationships (Potkonjak-Pijanović, 1996).

There are different opinions among teachers in the field of social and technical sciences. Therefore, the application of educational technology requires knowledge from several areas: pedagogy, psychology, didactics, computer sciences, informatics .... Because of this diversity, there are also different perceptions of educational technology, where every author defines the concept of educational technology according to their needs.

Educational technology has three domains of use:

- technology as a tutor (computer gives instructions and guides the user),
- technology as a teaching tool and,
- technology as a learning tool. (Stošić, 2015, p. 111)

### **Electronic education**

The programmed instruction was founded in 1954 by an American psychologist B. F. Skinner. Theories of programmed instruction were based on behaviourism as a direction in psychology, especially in the USA. Behaviourists believe that behaviour can be studied without thinking on psychological mental states. To study behaviour means looking for connections between stimuli and reactions of organism. Thorndike's laws of learning are very important here:

- a) **practice law** – the repetition of act strengthens connections between a stimulus and a response
- b) **effect law** – the strengthening of connections which are accompanied by a state of satisfaction (Petlák, 1997, p. 199)

In a similar way like Petlák, Turek (2008, p. 419) also dealt with Skinner's programmed instruction, according to whom Skinner's principle of programmed instruction lies in the division of the curriculum into successive, logically interrelated steps:

- 1. **principle of small steps** – curriculum is presented in very small parts, one step is composed of interpretation, question and response,
- 2. **principle of an active learner's response** – learner has to be active in learning,
- 3. **principle of immediate feedback** – learner knows if his response is correct or incorrect,
- 4. **principle of individualisation** – learner can proceed according to his own abilities and consideration,
- 5. **principle of evaluation and improvement** – analysis and evaluation of learner's response.

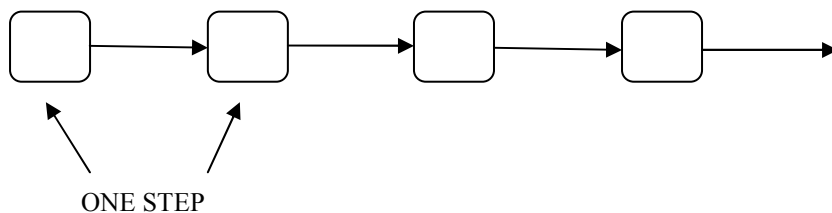
Petlák (1997, p. 201) in already mentioned work followed Turek and suggests that each step should be composed of 3 parts:

- 1. **stimulus from the computer** – presentation of information, interpretation of the curriculum and the task
- 2. **reaction of the learner** – he must solve the task, the author of the programme must solve possible reactions of the learner (correct, incorrect, no response)
- 3. **response of the computer to learner's reaction** – verbal comments to the reaction (correct, error, inaccurately)

Programmed instruction as Petlák (1997, p. 201) points out recognizes 3 main types of programmes:

- 1. **linear** – the creator is **B. F. Skinner**, student learns effectively if he gradually acquires a very small amount of knowledge,

### Scheme 1: Linear programme by Skinner



(Petlák, 1997, p. 201)

2. **branched** – the creator is **N. A. Crowder**, student has to learn and understand the subject, he is forced to think about it,
3. **mixed** – the combination of linear and branched programme.

As indicated by Turek (2008, p. 421), the first beginnings and construction of teaching machines is attributed to American S. L. Pressey, who designed them to best students. But these machines were very expensive and they were spoiled very often.

#### Teaching machines:

*informants* – interpretation of the curriculum,

*examiners* – testing and evaluation of students,

*repetitors* – repetition of the curriculum,

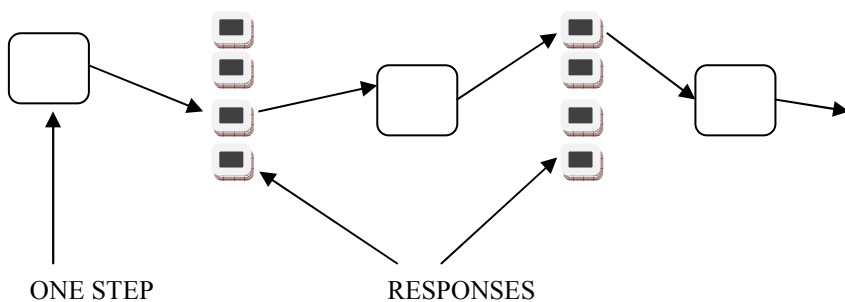
*trainers* – training of psychomotor skills,

*universal machines* – performed more functions simultaneously, interpretation + testing,

*adaptive machines* – adapt the pace of learning to individual possibilities and abilities of students.

Disagreements between Pressey and Skinner were described in the work “*Všeobecná didaktika*“ from 1997 by Petlák. In it he writes that Pressey differed from Skinner, because Skinner refused error in learning and Pressey accepts it. He argues that students should learn about the correctness or incorrectness of their responses and if they make mistakes they should know the correct response. Pressey’s programme is called **linear programme with multiple choice of responses**. Learning progresses linearly, step by step, following the main branch. Learning progresses linearly, step by step, following the main branch.

### Scheme 2: Linear programme with multiple choice of responses



(Petlák, 1997, p. 202)

In the 80's of the 20<sup>th</sup> century, the arrival of computers gets into the centre of attention, when the first 8-bit microcomputers began to expand. The book *“Virtuálna kolaborácia a e-learning”* by Kozík (2006) familiarizes us with the history of the introduction and use of computers in Slovakia, where he states that the development of computers in Slovakia, has started since 1985. In the second half of 80's, the first 16/bit personal computers were placed on the market. At that time in education, with the global development of cybernetics and artificial intelligence, it came to the improvement of teaching and the use of teaching machines. The computer started to be used as a learning and examining machine. Some theories claimed, that a computer could partially replace a teacher. In the early 90's, the Internet started to provide a new service, e-mail. The start and development of this new service launched the growth of electronic information on the Internet in the form of web pages. Not only hardware (technical equipment of computer) and software (programmed equipment of computer) began to improve, but also the types of communication technologies.

Continuous progress of science and technology brings the use of many technologies which have still been improving. Eger (2010) argues that the e-learning improved due to further innovations in the field of technology and by gradual improvement of methodology from pedagogical point of view. Educational portals were established and e-learning was increasingly applied at universities.

Warschauer (1999, p. 4) dealt with Internet issue and points out that nowadays the Internet is the most important current development affecting reading and writing. It *“has developed within 3 decades into a mass information and communications medium and affected business, education and entertainment. Computer-mediated communication combines several features and they togeth-*

*er form powerful new medium of human interaction. The online environment allows text-based interaction. It brings two main functions into one medium. We can communicate and interpret experience by meaning”.*

Furthermore, he highlights the positives of the Internet. *“The Internet is more exclusive than other media (television, radio, newspaper) due to the cost, education and language requirements necessary to access it. It is more diversified than other media. By creating more channels for global communication and a need for a lingua franca, the Internet strengthens the dominance of English as a global language”* (Warschauer, 1999, p. 9).

## Conclusion

Electronic education (e-learning) belongs to the most modern way of teaching foreign languages based on the Internet. It enables easier information retrieval, resources and offers a wide range of application. E-learning has been constantly improving thanks to still new and new innovations in the technological field. Information and communication theories enable sense perception and compared to traditional forms of education, they achieve a higher effect in the students' learning process. The availability of electronic and web-enabling technologies also influences the way we view the learning strategies of the future. Multimedia teaching as a result of the technical development of computers is a component that combines information and communication technologies with study courses.

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