DEVELOPING TEACHING METHODS FOR FUTURE TEACHERS WITH MULTIMEDIA TECHNOLOGIES

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ABSTRACT

This paper rationalizes the training of future teachers to use multimedia training tools and defines future teachers' readiness to use multimedia training tools reflecting the specifics of professional teaching activity. The criteria have been developed (availability of stable motives to use multimedia training tools at school; depth and strength of scientific and theoretical knowledge on multimedia training tools and methodology to apply them at school; level of mastering methods in connection with the use of multimedia training tools to solve typical teaching tasks of future teachers) and levels of future teachers' readiness to use multimedia training tools have been specified. Model for training future teachers to use multimedia training tools has been theoretically rationalized and experimentally tested, reflecting the structure of professional competence of future teachers in the use of multimedia training tools.

Keywords: Multimedia training tools; Readiness; Future teachers; Model; Professional competence; Use of multimedia training tools.

INTRODUCTION

Within the informatization of education, of urgency is the creation and use of new training tools to organize the work of students in a single educational environment and contributing to education quality enhancement. Such tools include multimedia training tools, i.e., information sources containing graphical, word, voice, musical, video, photo and other information in digital form seeking to solve the goals and tasks of modern education. Multifunctional multimedia training tools enable to place large volume of information; quick search and access to the required information; unbiased and appropriate knowledge assessment in students; visual presentation of many complex phenomena and processes; use of graphic design; co-acquisition of information. In that connection, utmost realization of education's information tasks requires training of future teachers to be improved teaching them to use modern multimedia training tools.

Methods of research

Analysis of psychological and pedagogical, scientific, scientific and engineering and methodological literature on the topic of the research (This method will allow us to justify the essence of studied problem in the form of theoretical assumptions);

Modeling (This is the method of model creating and studying of the model of our theoretical assumptions. Creation and research of the model allows us to get new knowledge, a new comprehensive information about the researched topic);

Pedagogical experiment (it is a special organization of educational activities in order to verify and substantiate our pre-designed theoretical assumptions);

Processing and interpretation of experimental data (based on this method, we formulate conclusions about the confirmation of the theoretical assumptions of scientific research).

Analysis Result

Future teachers' readiness to use multimedia training tools is a stable feature of teacher's personality which determines the ability to solve basic professional pedagogical tasks through the use of multimedia training tools within multi-subject polyfunctional pedagogical activity seeking to educate, train and develop children of school age.

Future teachers' readiness to use multimedia training tools includes the following structural components:

Psychological, represented by motives expressed via interests and needs to use multimedia training tools, pursuance of professional improvement in the use of multimedia training tools in future teaching activity;

Scientific and theoretical, assuming the aggregate of topic-related methodical knowledge integrating general and special knowledge in the use of multimedia training tools;

Technological, represented via a range of skills on arrangement of education of pupils using multimedia training tools.

Future teachers' readiness to use multimedia training tools is formed gradually:

1. Decisive is the establishment of motivation to use multimedia training tools at school and implementation of available competences within professional pedagogical training;
2. Experience in solution of professional tasks of future school teachers using multimedia training tools based on general professional content;
3. Improvement of experience in solving professional tasks of future school teachers using multimedia training tools during the study of methodical disciplines.

The methodology for formation of future teacher's readiness to use multimedia training tools assumes the use of productive teaching methods (project method, method to solve reasonably selected tools, etc.); use of modern technical and information teaching tools (computers, multimedia projectors, Internet resources, etc.); arrangement of academic process based on optimal combination of collective, group and individual forms of learning activities. In the course of development of the methodology to form readiness of future teachers to the use of multimedia training tools, specific features of school teacher's professional activity are accounted for:

Multiple subjects, making a school teacher master theory and practice in teaching a few subjects in various areas of knowledge; Polyfunctionality, meaning exercising a few functions by a school teacher: teaching, educating and developing pupils; assistance in socialization of pupils, creating common culture in them; pedagogical consulting for parents, governing and coordinating training effects of family and school;

Taking the age-relate characteristics of pupils into account presumes the observance of particular psychological, pedagogical and methodical conditions as well as the use of health-saving technologies in the arrangement of the academic process.

Levels of readiness of future teachers to use multimedia training tools are as follows:

I. High;

II. Middle;

III. Low.

The diagnostics of readiness of future teachers presumes the study of its structural components and is carried out on the basis of the following criteria:

I. Stable motives to the use of multimedia training tools at school;

II. Depth and strength of scientific and theoretical knowledge on multimedia training tools and methodology in connection with their use at school;

III. Level of mastering methods to use multimedia training tools in pursuance of solution of typical teacher's tasks.

As stated in the title, the content of the course module is focused on the use of multi-media in education. In particular, it describes the role of teachers and students, and the potential impetus of multimedia on students' learning, motivation, cooperation, etc. Currently, students are encouraged to use a growing number of multimedia products in a number of different ways. The application of interactive multimedia into educational systems takes place all over the world, although the range and speed of implementation varies from country to country. In educational settings, multimedia products and online services serve as a means of communication and expressive tool in various pedagogical scenarios. The notion of pedagogical scenario designates a postulated sequence of imagined events of a learning situation. Each event is characterized by specific roles of teachers, students and educational multimedia products. Some products and materials are designed to control the process of presentation and students are assigned a somewhat passive role as receivers of information. Other products and materials are interactive in the sense that students are assigned an active role, where they can select topics and jump between them. The different ways in which students deal with multimedia are categorized – according to a scenario model – into four pedagogical scenarios (Andresen, 1999):

1. The use of multimedia linear educational sources;
2. The use of multimedia hypertext-based materials;
3. The use of multimedia supervising products;
4. The use of multimedia productive tools and ingredients. Scenarios 1–3 relate to students as to end users of messages from educational multimedia, whereas Scenario 4 regards students as producers of small-scale multimedia products. The use of linear multimedia in Scenario 1 regards the reception of the content of linear multimedia products. Students perform different tasks in a sequence. Initially, they can pick the episodes they want. However, once potentially useful sources have been deter-mined, students have very limited control over the narration.

General Information The use of hypertext-based educational materials in Scenario 2 encompasses the reception of the content of non-sequential multimedia products. Non-sequential narratives include hypertext-based, interactive materials and they are often used as information providers. No guidance is offered through different sections, thus making the student act as an explorer. The use of multimedia tutoring products in Scenario 3 regards the reception of the content of multimedia products aimed at teaching. The ese products display various guidelines for students and help them break down and structure different tasks. The is type of products typically has a tutoring strategy. Firstly, they are based on knowledge about a subject matter and about instruction, often presented in drill-and-practice sessions. Secondly, they apply a critiquing strategy, e.g. provide feedback tailored to the particular needs of each student helping her/him confirm hypotheses and refi ne proposals. The use of multimedia productive tools in Scenario 4 covers students as authors and producers. The is scenario regards the production of multimedia presentations by means of proper multimedia elements to be used by students in order to create and edit multimedia products in the classroom, and by means of

proper tools to handle elements of texts, graphics, sounds, etc. Here, students take on the role of producer. The four scenarios cover widely used multimedia genres in educational settings that differ with respect to the role of students and teachers, as well as to the function of multimedia products and online services. Many mainstream approaches are similar to one of the scenarios or consist of a mixture of these. It does not mean, however, that the common multimedia pedagogical practices are considered limited to these four approaches. The intention is to describe some typical pedagogical scenarios and not to present an exhaustive list of scenarios. More specialized scenarios can, of course, also be found. Those taking a course on multimedia in education are expected to develop knowledge and skills in the following areas: The scenario model concerning the use of multimedia in education and important learning and teaching aspects of learning with educational multimedia; Critical and reflective selection of educational multimedia according to educational objectives of the use of .

REFERENCES

1. Aaron M, Dicks D, Ives C, Montgomery B (2004) Planning for Integrating Teaching Technologies. Canadian Journal of Learning and Technology. Spring 30.
2. Ezziane Z (2007) Information Technology Literacy: Implications on Teaching and Learning. Journal of Educational Technology & Society 10: 175-191.
3. Garrison JA, Schardt C, Kochi JK (2000) Web-based distance continuing education: a new way of thinking for students and instructors. Bulletin of the Medical Library Association 88: 211-217.
4. Graziano KJ (2012) Creating Student Generated Multimedia: Benefits and Challenges for Teacher Education. Excellence in Education Journal 1: 6-28.
5. Husler RP (1996) Digital library: content preservation in digital world. DESIDOC Bulletin of Information Technology 16: 31- 39.
6. Juniu S (2003) Digital Democracy in Higher Education Bridging the Digital Divide. Innovate Journal of Online Education 2.
7. Magdy FI, Corey CJ, Rex J, Antony J, Albert B (2014) Development of multimedia modules for education. Computer Applications in Engineering Education 3: 97-110.
8. Parshina L (2014) Multimedia technologies as a tool for teaching supervision over the students' skills (within the course on “music theory training”). Life Sci J 11: 547-551.
9. Pomorov SB, Prokhorov SA, Sidorov VA, Stepanskaya TM (2014) Design space as synthesis of architecture and painting with the use of digital technology. Life Sci J 11: 365-370.
10. SakenovD.Zh (2012) Preparation of students of higher education institution for professional activity in the course of studying of pedagogical disciplines. World applied sciences journal 19: 1431-1436.
11. Timothy E (2004) Animating to Build Higher Cognitive Understanding: A Model for Studying Multimedia Effectiveness in Education. Journal of Engineering Education 93: 59-64.
12. Wayne B, Aura G, Ian H (2013) Educational Innovations in Multimedia Systems. Journal of Engineering Education 90: 21-31.
13. Groth R, Spickler D, Bergner J, Bardzell M (2003) A qualitative approach to assessing technological pedagogical content knowledge. Contemporary Issues in Technology and Teacher Education 9.
14. Efimova EA (2011) Interactive learning as a means of preparing professionally mobile specialist. Vocational secondary education 10: 23-24.

15. Rintala J (1998) Computer technology in higher education: An experiment, not a solution. Quest 50: 366-378. EJ 576 392 Romiszowski A (1993) Telecommunications and distance education. ERIC Digest 93-2. Syracuse, NY: ERIC Clearinghouse on Information Resources. ED 358 841.