

About Conception of Postgraduate Studies “Multimedia Application and E-learning Teacher”

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Abstract

The author describes key considerations of the conception of postgraduate studies called “Multimedia application and e-learning teacher”, which will be offered this year at the Faculty of Ethnology and Sciences of Education at the University of Silesia. The author focuses in particular on such conceptual aspects and assumptions of the postgraduate studies, as the studies objective, the overall aim of the studies, specific objectives of the studies: identification of the target group, qualifications awarded to students after graduation.

The postgraduate studies called “Multimedia application and e-learning teacher” have been developed on the basis of current postgraduate studies “E-learning in the teachers’ profession” and on the basis of results of a new Project B2.2. entitled “Development of a set of national professional competence standards required by employers”, which concerns the development of 300 standards of professional competence, is run by Doradca Consultants Sp. z o.o., Institute for Sustainable Technologies - National Research, IPiSS WYG International, ŁCDNiKP, and is particularly important and necessary. As part of the project, qualification standards will be developed for such contemporary innovative and necessary professions as “Multimedia Application Teacher”, “Distance Learning Teacher”, “On-line Examiner”. The author of the article is involved in the project as a subject matter expert and in this paper will present concepts relating to the development of qualification standards for the new profession of Multimedia Application Teacher. Europe’s future sustainable growth and competitiveness depends to a large extent on its ability to embrace the digital transformation in all its complexity. Information and communication technology (ICT) is increasingly impacting all segments of society and the economy. The Digital Agenda for Europe 2013-2014 (<https://ec.europa.eu/digital-agenda/en/news/-digital-do-list-new-digital-priorities-2013-2014>) analyses and describes such issues as: 1) A European borderless economy — the Digital Single Market; 2) Speeding up public sector innovation; 3) Very fast internet supply and demand; Cloud computing; 4) Trust and Security; 5) Entrepreneurship and digital jobs and skills; 6) Beyond R&D&I: An industrial agenda for key enabling technologies; 7) Implementation and governance. In particular, “The Commission signals that by 2015 700,000 to 1 million ICT jobs will not be filled in Europe, due to lack of skilled personnel. Additional action is needed to boost the overall number and the employability and mobility of ICT experts. Therefore the Commission will launch a ‘Grand Coalition on Digital Skills and Jobs’.” That is why postgraduate studies called “Multimedia application and e-learning teacher”, described in this article, are particularly important and necessary in the context of global Digital Agenda for Europe 2013-2014 and in the context of successful decisions concerning teacher training and other specialists’ train-

ing in the area of multimedia application, ICT and e-learning in Poland, and generally in the area of digital technology.

Keywords

e-learning, computer science, multimedia application, teachers' competences, project, post-graduate studies, project, training courses.

INTRODUCTION

The global transformation from industrial to information society as well as social and economic changes taking place both in Poland and other European countries have necessitated reforms in many areas of government responsibility. In this respect, the priorities include reforming the education system involving the implementation of modern educational technologies and modes of tuition.

Distance learning, thanks to such advantages as flexibility, ease of access, modular character, quality, cost-effectiveness, state-of-the-art technology, large audiences, social balance, global reach, the new role of the teacher, positive effect on the learner, has become a leading mode of tuition and instructional technology practically at all levels of the education system.

DISCUSSION

The postgraduate studies called "Multimedia application and e-learning teacher" have been developed on the basis of current postgraduate studies "E-learning in the teachers' profession" and on the basis of results of a new Project B2.2. entitled "Development of a set of national professional competence standards required by employers", which concerns the development of 300 standards of professional competence, is run by Doradca Consultants Sp. z o.o., Institute for Sustainable Technologies - National Research, IPiSS WYG International, ŁCDNiKP, and is particularly important and necessary. As part of the project, qualification standards will be developed for such contemporary innovative and necessary professions as "Multimedia Application Teacher", "Distance Learning Teacher", "On-line Examiner". The author of the article is involved in the project as a subject matter expert and in this paper will present concepts relating to the development of qualification standards for the new profession of Multimedia Application Teacher. Europe's future sustainable growth and competitiveness depends to a large extent on its ability to embrace the digital transformation in all its complexity. Information and communication technology (ICT) is increasingly impacting all segments of society and the economy. The Digital Agenda for Europe 2013-2014 (<https://ec.europa.eu/digital-agenda/en/news/-digital-do-list-new-digital-priorities-2013-2014>) analyses and describes in particularly 5) Entrepreneurship and digital jobs and skills and in this documents has stressed, that "The Commission signals that by 2015 700,000 to 1 million ICT jobs will not be filled in Europe, due to lack of skilled personnel. Additional action is needed to boost the overall number and the employability and mobility of ICT experts. Therefore the Commission will launch a 'Grand Coalition on Digital Skills and Jobs'."

That is why postgraduate studies called "Multimedia application and e-learning teacher", described in this article, are particularly important and necessary in the context of global Digital Agenda for Europe 2013-2014 and in the context of successful decisions concerning teacher training and other specialists' training in the area of multimedia application, ICT and e-learning in Poland, and generally in the area of digital technology.

Discussion sub-point 1

The documentation of the postgraduate studies called "Multimedia application and e-learning teacher" includes all the necessary components (Figure 1):

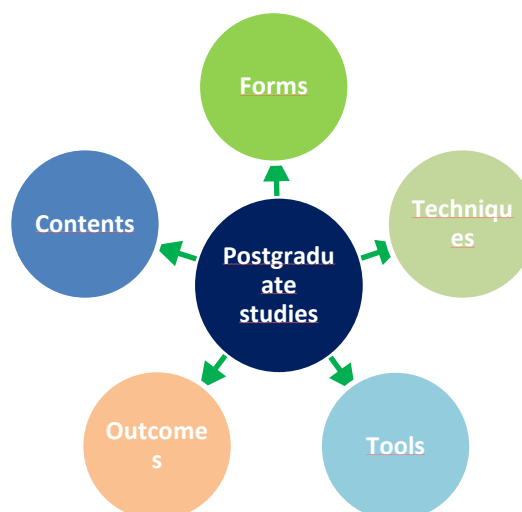


Figure 1: Conception components of the Postgraduate studies “Multimedia application and e-learning teacher”

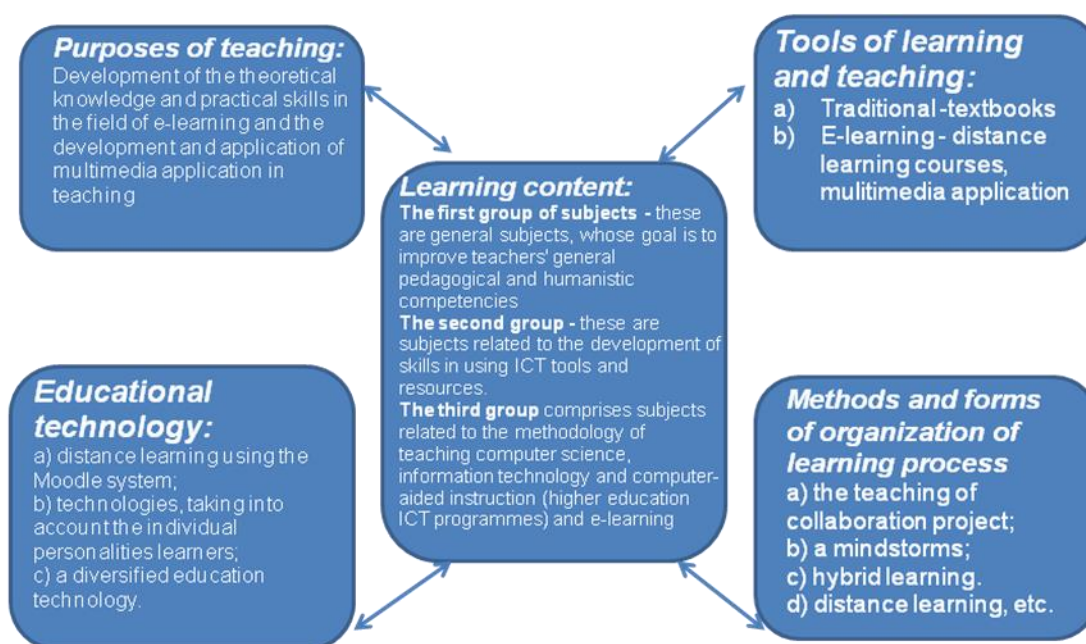


Figure 2: Conception components of the postgraduate studies “Multimedia application and e-learning teacher” with their description and content

Subjects have been designed with a view to the development of competencies in teaching and the humanities, multimedia application design, Web 2.0 and Web 3.0 technologies, CMS, LCMS and the methodology of the use of informatics tools and multimedia in education.

The content of the post-graduate studies includes several groups of subjects:

The first group – these are general subjects whose goal is to improve teachers' general pedagogical and humanistic competencies (learning theories, ethical, cultural and legal aspects of use of ICT in the educational process, teaching computer science and e-learning and competence in mathematical statistics).

The second group – these are subjects related to the development of skills in using ICT tools and resources (Office package (text editor, spreadsheets), Databases, Computer Graphics, Computer Networks, Computer Architecture, others).

Among more important learning outcomes of post-graduate studies we can specify: Knowledge, Skills and Societal Competences.

Knowledge

W-1. The graduate will have basic systematised knowledge of structured education, teaching and learning; will understand these processes as well conditions, and have basic knowledge of the design of situations and educational systems, with particular emphasis on the use of support systems for distance learning. The graduate will be familiar with types of computer networks and the principles of their functioning. Will have knowledge of the architecture of the Internet, online services and the methodology to use Web 2.0 and Web 3.0 in teaching and learning, design and use of multimedia application in teaching.

W-2. The graduate will have has basic knowledge about multimedia and digital media, will be familiar with characterized by multi-media technology and provide aesthetic and technical principles for the design of multimedia applications; will know multimedia file formats and conversion methods. Will also have knowledge about the development of multimedia educational materials for distance learning and distance courses in particular.

Skills

U-1. The graduate will be able to obtain information from literature, databases and other sources, and integrate information, interpret it, as well as draw conclusions and formulate and justify opinions.

U-2. The graduate will be able to inspire, animate and design situations of teaching and learning in respect of computer science and information technology. Will be able to use basic knowledge of information technology and teaching to analyse and interpret the problems of education, promote self-reliance in the development of knowledge and inspire lifelong learning.

Societal competences

K-1. The graduate will understand the need and opportunities for continuous training – improving professional skills, personal and social, by using e-learning in the first place.

K-2. The graduate will be aware of, and understand, the importance of non-IT aspects and results of the activity of a teacher having distance teaching competencies, including the impact on the environment and society, and the related responsibility for decisions. The graduate will be aware of the importance of conduct in a professional manner and respect for the rules of professional ethics and respect for diversity of views, cultures, educational theories and teaching and learning methods.

Discussion sub-point 2

No less important is the **third group of subjects**, which comprises subjects related to the methodology of teaching of computer science, information technology and computer-aided instruction (higher education ICT programmes) and e-learning (running a distance learning platform, its management, development of distance courses, educational resources, conducting lessons in remote mode), including the formation and development of students' key competencies in the case of e-learning programmes. Post-graduate programmes will help to ensure preparation of teachers to use e-learning in the development of students' key competencies for lifelong learning (eight key competencies, described above), and other important competencies in an operationalisation context including:

- I. Planning, organizing and evaluating their own learning by students.
- II. Communicating effectively in different situations.
- III. Effective coordination in the team.
- IV. Solving problems in creative ways.
- V. Efficient use of the computer.

Practically speaking, all these competencies can be successfully developed by using ICT, e-learning, CMS, CLMS systems, using Web 2.0, 3.0, and other technologies, provided that teachers undergo appropriate training. Equally important are the other learning outcomes of post-graduate studies.

Knowledge

W-3. The graduate will demonstrate familiarity with Learning Content management systems (LMS) and Content management systems (CMS) for distance learning support, will have knowledge of the effective use of LCMS systems in teaching and learning and use the CMS for developing information and education space on the Internet.

W-4. The graduate will have elementary knowledge of intellectual property and patent law, and elementary knowledge about interpersonal and social communication.

Skills

U-3. The graduate will be able to present basic concepts of digital media technology and use it in a targeted and focused on teaching different subjects. The graduate will have the ability to recognize and present basic psychological, aesthetic, legal, and social aspects of information and communication technologies, and will be able to develop certain multimedia teaching materials.

U-4. The graduate will be able to select appropriate models of distance education, types of courses, to carefully formulate objectives, to select content, methods, forms, conventional and digital means; will have the ability, when formulating and solving IT tasks - to discern their non-IT aspects, including environmental, economic, psycho-pedagogical and legal aspects; will have the ability to apply the principles of health and safety at work and Internet etiquette.

Societal competences

K-3. The graduate will have a sense of responsibility for her/his own work and willingness to comply with the principles of teamwork and shared responsibility for the implementation of tasks, and will be able to think and act in an entrepreneurial manner.

K-4. The graduate will be is aware of her/his the social role as a of post-graduate studies graduate, will especially understand the need for the formulation and communication to society – particularly via the Internet – of information and opinions on the developments in ICT and e-learning; will endeavour to give provide information and opinions in a competent and comprehensible manner .

Organizational forms. Among main didactic classes types there are (Table 1):

Table 1: Didactic class types

Didactic class types	Hours
Lectures	50
Practical lessons	75
Laboratory lessons	205
Seminars	20
Total	350

Up to 50% of classes will be taught in a remote form using e-learning. The duration is three semesters.

Stuff Support of the Postgraduate Studies. The teaching staff will include members of the Faculty of Ethnology and Sciences of Education, the Faculty of Informat-

ics and Materials Science University of Silesia with special focus on computer science, information technology and distance learning specialists. High quality teaching will be ensured by laboratory classes in computer labs for groups of 15 students.

CONCLUSION

The University of Silesia, in order to meet the expectations of the modern economy seeks to disseminate public education at all educational levels, while increasing the quality and attractiveness of the offered educational services and their link with the needs of a modern economy.

Projects implemented by the University of Silesia are aimed at the systematic and well thought-out improvement of the potential of the university, at enhancing the educational facilities and infrastructure supported by scientific research activities, improving the competence of teaching staff, enhancing the attractiveness of the programmes of key importance for the economy and strengthening the relationship between science and the economy.

The Postgraduate Studies entitled "Multimedia Application and E-learning Teacher" is designed for teachers all over the Silesia region, aiming to resolve some problems associated with unemployment in the region as well as raise the level of innovation in the educational system through the active implementation of e-learning at all levels of education and improving qualifications of teachers in the Silesia.

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Biography



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