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TEACHER EDUCATION FROM E-LEARNER TO E-TEACHER

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Abstract

E-learning and e-teaching systems are involved in teachers professional activities and development in several ways (a) If e-learning/e-teaching is the technology which supports the process of teachers learning of university courses, the teacher is in the position of e-learner; (b) If e-learning/e-teaching is the content of the teachers university curricula in order to be applied in the teaching process, the teacher switches from the position of e learner to the one of e-teacher in blended or total e-learning systems. Systematic formal teacher education concerning e-learning/e-teaching implementation, and the structure of teachers ICT competencies and e-competencies, as well as the reasons for their occurrence, are considered. Teachers can be in a position of the creator of e-teaching process or the user of the e-teaching/e-learning attainment. Teachers need to re-think their underlying assumptions about teaching, about learning process, and, most fundamentally, about their role as educators. Teacher activities in e-teaching scenarios can be broken into two major tasks: providing the content for the students and supporting communication between students and tutors. Both tasks pose problems to teachers who are used to follow more traditional teaching methods so far. Therefore, modern teachers and e-teachers must be able to organize different types of e-learning and e-teaching scenarios. E-teaching requires a wide spectrum of e-roles. It is necessary for teachers in e-education environment to acquire sufficient knowledge about e-teaching and e-learning. e-learning can contribute to addressing each challenge by enhancing the preparation of new teachers, providing high quality and readily accessible professional development opportunities for active teachers, and making the teaching profession more attractive. The paper suggests that e-learning potential is a powerful tool for directing the teacher's quality challenges and obtaining e-teaching competencies. E-learning for teachers must reflect the principles of effective teachers' professional development.

Keywords: E-Teacher; E-Learning; E-Teaching; Curriculum; Professional Development Knowledge Society.

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1. Introduction

Teaching and learning discourse has been changed. The discourse on teaching and learning scholarship has been focused on passing knowledge derived from teaching practice in the context of other forms of scholarship, as well as in the context of considering of the role of teaching in society. New roles of the teaching process have been derived from the concept of knowledge society at all educational levels. On the other side, the strategy of lifelong learning as a continual process where each human being could expand and adjust their knowledge and skills, capacities of judgement and action should enable people to develop their professional roles. The first step in mobilizing the lifelong learning strategy is more flexible comprehension, evaluation and development of different forms of education and teaching. In the context of the information and/or knowledge societies and lifelong learning strategy, a new frame of the pre-service and in-service teacher education has been defined. The current level of the learning technology development provides opportunities for collaborative engagement, access to information, interaction with content and individual empowerment. Nowadays, rapid changes in communication technologies enable teachers to move from traditional face-to-face classroom activities to online classrooms, or online activities in the traditional classrooms.

Educational systems worldwide insist on using information and communication technologies (ICT) to teach students who gain the knowledge and skills needed for the future knowledge society. Both the students-prospective teachers and in-service teachers develop a positive attitude toward e-learning and using computers in their classrooms the constructivist and social constructivist concepts are the foundation of e-learning technologies. Current teaching, being social interactive process, is based on the social constructivist and constructivist concepts, too. Constructivist learning theory, especially socio-constructivism in education and higher education is the formative part of e-teaching and e-learning design. This means that successful learning depends on individual activities and experience in collaborative environment. According to the constructivist principles, e-teaching means to guide the students to construct their own knowledge and to be aware of the situational context this construction takes places thereby using modern ICT. The concept of cooperative teaching is the fundamental construct to develop e-teaching scenarios. What is relation between e-learning and e-teaching? Conceptual frameworks for e-learning and e-teaching are different. E-learning focuses on the learner and the learning process. The term “teaching” is used in two ways teaching as the teacher activities and teaching as the system of instructional activities. Then, there are two meanings of the e-teaching concept. According to Nakajima, e-teaching is the system designed to improve teacher’s performance, and their self-regulation and motivation. Its service designs are aimed at supporting teachers to teach effectively in an e-learning environment. The architecture of e-learning is centred on learner. The architecture of e-teaching needs to be centred on teachers. E-teaching is not just prerequisite to e-learning, but it can be a great innovation in education.

However, in this paper the term e-teaching is used in a broader sense. E-teaching is the instructional system of processes and activities designed according to the ICT development, characteristics, and models of e-learning, principles of formal communication, principles of e-education, principles of competence-based education system etc. Instructional systems, involve relationships, conditions, processes, causes, effects, and feedback. Development of e-learning systems and e-teaching modalities makes possibilities to involve them in teacher’s professional

activities and development in several ways. If e-learning/e-teaching is the technology which supports the process of teachers learning of the teacher is in the position of e-learner. If e-learning/e-teaching is the content of the teachers to be applied in the teaching process, the teacher switches from the position of e-learner to the one of e-teacher in blended or total e-learning systems.

2. Teachers Competence in the Knowledge Society

All actors in educational process agree that high quality teachers are the most important factors in a children and adolescence's education. Teacher's professional competence is the system of knowledge, skills, abilities, and motivational disposition that provides the effective realization of the professional teaching activities. The structure of teacher's professional competence becomes more complex.

Teacher's competence includes the three fundamental professional competencies

- 1) Educational competencies system of knowledge, skills, abilities and motivation dispositions to realize educational professional roles
- 2) Programme competencies or course content competencies – system of knowledge and skills from the course content and developed abilities to teach the student about the knowledge and skills;
- 3) Communication competencies system of the knowledge, skills, abilities, and motivation dispositions to realize the goals of communication and teaching social interaction.

To gain the expected outcomes of education process, a teacher can realize teaching/instruction by using the elements of information technology, developed models of multimedia teaching, and attainments of e-learning. These elements enable new teaching system design such as e-teaching. Realization of e-teaching requires that the teacher has mastered the wide repertoires of knowledge and skills involved in the fundamental categories of professional competencies. Formative components of teachers' competence in e-teaching include the system of didactical knowledge of the learning, teaching, instruction, educational e-possibilities. E-teaching competence is the synthesis of the didactical, technological, personal and organizational components that are necessary for effective e-learning and e-teaching modelling and realization.

3. Teachers ICT Competencies

Pre-requisites of the teacher professional activities are defined by the professional standards. The standards are determined by the description of the competencies. E-education and e-teaching are based on some technological standards of teacher's professional dealing standards.

There are three dimensions of the teachers' ICT-competencies

- 1) The teacher knows what learning activities ICT can be used in teaching
- 2) The teacher has the necessary skills for using hardware and software and
- 3) The teacher knows the pedagogical-didactical elements of ICT

Basic Computer/Technology Operations and Concepts use computer systems to run software, to access, generate, and manipulate data: and to publish results evaluate performance of hardware and software components of computer systems and apply basic trouble-shooting strategies as needed. Personal and Professional Use of Technology apply tools for enhancing personal

professional growth and productivity; use technology in communicating, collaborating, conducting research, and solving problems; promote equitable, ethical, and legal use of computer/technology resource. Apply learning technologies that support instruction in his or her grade level and subject Application of Technology in Instruction areas; must plan and deliver instructional units that integrate a variety of software, applications, and learning tools, lessons developed must reflect effective grouping and assessment strategies for diverse populations. Social, Ethical, and Human Issues apply concepts and skills in making decisions concerning the social, ethical, and human issues related to computing and technology; understand the changes in information technologies, their effects on workplace and society, their potential to address life-long learning and workplace needs, and the consequences of misuse. Productivity Tool integrate advanced features of technology-based productivity tools to support instruction extend communication outside the classroom, enhance classroom management, perform administrative routines more effectively, and become more productive in daily tasks. Telecommunications and Information Access use telecommunications and information access resources to support instruction. Research, Problem Solving, and Product Development use computers and other technologies in research, problem solving, and product development; appropriately use a variety of media, presentation, and authoring packages; plan and participate in team and collaborative projects that require critical analysis and evaluation present products developed. Information Literacy Skills develop information literacy skills to be able to access, evaluate, and use information to improve teaching and learning.

4. Teacher's E-Teaching Competencies

The structure of e-learning process brings about a few models of learning scenarios and e-teaching scenarios

- web-based e-learning scenarios;
- classroom-based e-learning scenarios;
- online classroom e-learning scenarios;
- scenarios of net-based course;
- scenarios of e-learning with streaming media technology;
- scenarios of e-learning in the hypermedia classroom;
- Scenarios of e-learning based on the combination of the traditional classroom learning and e-learning.

Teachers can be in a position of the creator of e-teaching process or the user of the e-teaching/e-learning attainment. Teachers need to re-think their underlying assumptions about teaching, about learning process, and, most fundamentally, about their role as educators. Teacher activities in e-teaching scenarios can be broken into two major tasks: providing the content for the students and supporting communication between students and tutors. Both tasks pose problems to teachers who are used to follow more traditional teaching methods so far. Therefore, modern teachers and e-teachers must be able to organize different types of e-learning and e-teaching scenarios.

5. Professional Development from E-Learner to E-Teacher

New strategies of teacher's education for new professional roles and competencies in the knowledge society have been developed. According to the continuity of the teacher's professional/vocational development, the teacher's professional improvement regards the development of three fundamental professional competencies educational programme or course content competencies as well as communication competencies.

This paper examines the reasons for systematic formal teacher education in e-learning/e-teaching implementation, in professional dealings as an e-teacher in different courses and e-teaching manager as well as in teacher's ICT and e-competencies. During past decade, a large number of initiatives, coming from both the research community and educational policy authorities, have been directed towards the preparation of teachers in order to enable them to integrate ICT in their everyday educational practice and to develop teacher's skills in the pedagogical application of ICT in teaching and learning processes.

6. Development of E-Teaching Competencies

The development of competencies for online teaching should lead to the associated training development for online teachers and to the certification of online or/and e-teachers. Development and application of the e-education involve development and establishment of technological support and intensive training for teachers and students so that they could acquire IT skills needed for implementation and application of IT in e-teaching and e-learning. It is the uses of e-learning as a vehicle for delivering professional development targeted to teacher specific needs, and as a content of professional activities, that is emphasized in the information society context.

E-technology integration in the classroom is becoming the significant priority of national educational systems. Teacher education is becoming an important part of the education system.

The curriculum has been created for professional groups with different prior education. However, all of them are going to use e-learning and e-teaching procedures in some kind of teaching and training in the future. Thus, different professional groups can follow e-learning courses. In teacher education context, the curriculum is focused on the development of different e-roles for teachers and e-teachers, e-creator, e-designer, e-facilitator, e-tutor, e-moderator, etc.

7. The Outcomes of E-Learning:

- 1) Functionally explain the processes and dimensions of e-education, e-teaching and e-learning
- 2) Research the basic principles of the learning base on the multimedia, analyze interaction as well as synchronous and asynchronous e-learning/e-teaching communication
- 3) Select and apply the adequate technologies and tools in the effective creation of different e-learning solutions
- 4) Understand the functioning of the hardware, software and communication e-learning infrastructure

- 5) Create configuration and apply different multimedia devices, software tools, video conferencing solutions in the process of e-learning development and realization
- 6) Design, develop and realize e-learning procedures based on the specific educational needs of individuals, groups and systems
- 7) Realize the multimedia project and teaching procedures on his or her own
- 8) Critically analyze, apply and develop the system for help in learning and for student support apply adequate technologies, tools and services for user online support
- 9) Develop assessment plan, e-assessment techniques, collect data of the achievement, interpretation the student improvement in the frame of the formal, informal and social learning
- 10) Effectively apply LMS in online teaching, coordinate online processes, assess effectiveness of the realized courses in e-environment
- 11) Assess instructional frame for infrastructure defining and net demands for e-learning;
- 12) Analyze and improve roles of e-educator, e-manager, e-administrator, manage one's own learning and make plans for professional development
- 13) Resolve e-educational problems and innovate e-learning and e-teaching process
- 14) Develop and implement research project in the field of e-learning, and develop interdisciplinary approach to e-learning process
- 15) Manage and transform work or study context that are complex, unpredictable and require strategic approach in e-learning fields
- 16) Take responsibility for contributing to professional knowledge and practice and/or reviewing the strategic performance of e-learning teams.

8. Conclusion

E-teaching requires a wide spectrum of e-roles. It is necessary for teachers in e-education environment to acquire sufficient knowledge about e-teaching and e-learning. e-learning can contribute to addressing each challenge by enhancing the preparation of new teachers, providing high quality and readily accessible professional development opportunities for active teachers, and making the teaching profession more attractive. The paper suggests that e-learning potential is a powerful tool for directing the teacher's quality challenges and obtaining e-teaching competencies. E-learning for teachers must reflect the principles of effective teachers' professional development.

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