

Name of the Organisation:

Palacký University Olomouc, Faculty of Education, Žižkovo nám. 5, Olomouc 771 40, Czech Republic /Public University/

Priority Research Area*:

Social Science and Humanities

Research Field (Project Focus):

Basic research

Name of the Project

Changes of Educational Paradigm in the Online Virtual Environments

Main Objectives:

When examining online learning environments for education, it is important to ask whether the manner of their use corresponds to current pedagogic theories and approaches. Two main trends are evident in the technological theories of teaching (Bertrand, 1998) – the systemic, which tries to precisely define the functions and relationships in the system and apply these to learning so that it is as well organised as possible (e.g. through ICT), and hypermedia, which examines technological environments from the perspective of interactivity and building multilayered systems enabling the active involvement of students (Josephy, 2011). Teaching with using ICT should lead to education where the learner is at the centre, although the aspect of cooperation (collaboration) in learning is no less important. The ability to simulate conditions in the real world in a virtual ICT environment (e.g. simulators of transport vehicles, medical procedures, etc.) enables learning in context and by reconstructing models of reality, to see mutual connections or dependencies between phenomena.

With the onset of online learning environments in the education process, traditional education paradigms have been changed in many ways, with a growing need to redefine certain pedagogic terms and areas of pedagogic study. Some of the most significant changes are taking place in the **role of the teacher**, who has ceased to become the only source of information and final authority in passing on information to students. The **role of the student** is also changing in relation to these changes in the teacher's position in the classroom. From a previously passive role in the education process, where the student accepts information from and is directed by the teacher, the student has become an active creator of knowledge, which he/she constructs with the help of ICT. As stated by Zounek and Šedová (2009), the student thus takes responsibility for his/her learning and organises his/her own work, and in some cases may take on the role of "expert" or "teacher". The growing activation of students in the education process may also be related to the fact students also want to share in the decision on the methods by which they want to be taught – they reject traditional approaches to learning and expect to be taught with the help of ICT, which represents the natural environment today in their everyday life. According to Brdička (Brdička, 2012) the brains of today's pupils and students have been restructured through the use of technology from an early age, so that that are unable to adequately respond to methods used by teachers from an older generation. The manner in which the curriculum is presented has also undergone change with the onset of e-learning in education. **Non-linear representation of the curriculum** has hitherto represented the presentation of "non-text" (in the sense of continuous text) material. The onset of electronic hypermedia enabled a shift to non-linear teaching strategies, constructivist methods, greater emphasis on non-verbal components of teaching and the gradual "break up" of text into hypertext fragments.

Main Activities:

The aims of the research are:

- 1) to identify factors affecting and changing the education process in the online learning environments, especially from the perspective of the subjects of education (level of ICT skills, information and reader literacy, teaching styles) and the application of didactic resources (organisational forms of teaching, teaching methods, teaching principles) in these environments,
- 2) to describe online education systems (3D MUVE Second Life) from the perspective of current pedagogic theories and approaches,
- 3) to assess to what degree the didactic aspects of their use correspond to current pedagogic knowledge.

A content analysis of documents will be used for the description of the above aspects, with explorative methods used for selected areas (semi-structured interviews, video studies, observation, questionnaire).

Estimated Total Budget (in EUR)

200 000

Planning Outputs/Results

- 1) scientific monograph
- 2) professional articles in reviewed periodicals (Jrec, Jimp)
- 3) presentation of the results at international scientific conferences
- 4) special web site with the project results in multimedia form.

Contact Persons (telephone, e-mail/web page)

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