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A NEW CONCEPTUAL APPROACH TO CREATIVE E-COURSE MODEL DESIGN IN ENGLISH FOR ENGINEERING STUDENTS

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Introduction

The research project pursued the goal of integrating creative learning methodology with e-learning in the online course of English for Specific Purposes (ESP). Creative e-learning, was defined as the integration of creative learning methodology with e-learning facilities to promote creative abilities of the target audience.

Aims of the study

The basic aims of the study included

1. analysis of the main methodological approaches to developing creativity and integration of ICT facilities with creative e-learning, especially in learning languages
2. development of an online course design and delivery approach to creative learning of ESP for engineering students on the basis of the cultural-historical activity theory; design of the online course content (texts, audio-visual material, online tests, creative thinking techniques, tasks and problem solving situations)
3. implementation of the online course delivery and analysis of the project results.

Methodological approach

In the present research creativity is interpreted as the ability to produce novel (original/unexpected) work that is high in quality and is appropriate (useful). The criteria developed for the design and delivery of a creative e-course in ESP included 1) the course content; 2) creative process support (creative thinking tools, techniques and software); 3) course administration (selection of the learning content, user support, software environment and assessment techniques).

According to Vygotsky, the founder of the cultural-historical theory, creativity is understood in terms of collaboration and interaction. The transforming process depends upon cooperative labour, social interactions, and external and internal tools within the 'zone of proximal development'. The above conceptual approach adapted in the e-course included 1) the selection of a challenging, motivating and meaningful study content corresponding to the professional needs and interests of the students taking into account the dynamic development of the professional area of the students, as well as the student age specifics, their individual peculiarities and English language proficiency; 2) structuring of the study content (implementation of the deductive approach, pointing out the core units, development of a flexible module system, concept maps, etc.); 3) selection of the problem solving tasks and situations based on a contradiction; 4) providing tools for creative solutions and scaffolding where necessary. The Blackboard (Blackboard Inc.) software environment was used for the delivery of the learning material, basic performance assessment, user support, task information, and task feedback, while ThinkTank™ (Groupsystems company) and Zing (Zing Technologies Pty, Ltd.) team learning tools were primarily used for creative collaborative problem solving. A total of 43 first-year students of the Faculty of Electrical and Power Engineering, RTU, took part in the course. The paper illustrates the tasks and the problem solving process by the students in greater detail.

Results and conclusions

Observations in the face-to-face ESP classes, as well as analysis of the results of the online tasks allow to conclude that applying the methodological principles of cultural-historical activity theory in the selection and organization of the e-course content and providing a student-centered pedagogical environment promoted student creativity and ESP proficiency. The integration of ThinkTank and advanced Zing team learning tools in problem solving considerably helped the students interact and create new knowledge online by working together.