

Towards a Pedagogically Sound Personalized and Engaging Learning Environment

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Themenbereich: Lernen mit und durch Mitstudierende

Schlagworte

Pedagogy, learner diversity, personalization, learner engagement and collaborative learning

Lehrkonzept, Reflexion & Evaluation

Learning that meets individual needs of the learner and effectively engages learners results in a more successful, satisfying and positive learning experience. However, how to efficiently adhere to individual learners' needs as well as fully engage learners in e-learning especially in an environment in which technology and approaches to learning are all in transition still poses a great challenge. The fundamental concerns include (a) understanding and applying sound pedagogical foundation in applying emerging technologies for effective learning in e-learning (b) how to efficiently personalize a learning experience in order to cater for diverse individual learner needs amidst the diversity and mobility emerging technologies bring along (c) ensuring learner participation and quality engagement especially in collaborative learning in e-learning environment.

The study attempted to address these concerns from both the technological and pedagogical perspective for the purpose of achieving effective integration of technology and pedagogy. However, this abstract highlights the approaches that were used from a pedagogical/educational view.

A framework as a platform for integrating pedagogy and technology in context-aware learning environment was formulated to provide a guideline on ensuring pedagogical fundamentals are applied. The framework included among others, components for ensuring sound educational practice (like instructional framework & learning theories) and addressing the uniqueness of distance learning (DL) in the case of e-learning in DL environment. In the framework, emerging technologies especially those applying context-awareness like mobile and pervasive technologies were considered.

Some of the approaches used to enhance learner engagement especially in collaborative learning included project-based approach and the use of structured small-group-based student-directed approach. Sociological preference similarity strategy was used as a basis for forming the small groups. This also enhanced social personalization in that learners were able to work on a collaborative activity of their preference in terms of their sociological learning preferences. The argument behind this approach is based on similarity-attraction theory which attempts to explain and predict interpersonal liking by asserting that people are attracted to others who are similar to themselves. Consistent with this view, research has revealed that people prefer to affiliate with those who share similar characteristics compared to others who do not.

In the study, a Personalized and Engaging Context-aware Learning Environment (PECALE) tool was implemented with the aim of enhancing personalization and learner engagement based on the formulated framework. PECALE was integrated in Canvas LMS (learning management system) however, these approaches are applicable in any LMS. The experiment was performed on three groups of students within their normal learning programs. The groups comprised of different subject domain. They included the intermediate level German Language students,



Masters (teacher- student) Didactics of Computer Science students and 2nd year Computer Science students, in Systems Analysis & Design (SAD) course. The groups also used different modes of learning (i.e. face to face and online learning). Based on the diversity in experimental groups, it is the author's believe that the study's approach can be applied by any educationist/teacher within any e-learning platform for any subject domain. The results of the study were significantly positive on the aspect of learner participation both individually and when working on collaborative activities. The results were also significantly positive on individual learner performance, group performance and learner satisfaction.

Weiterführende Informationen zur Autorin

Betty Mayeku (Institute of Computer Science, Telematics Research Group, Research: e-learning). I am a PhD student currently writing my thesis (i.e. by the time of submission of this abstract). My work is in the area of e-learning. My research is in the broader concept of "Integrating Pedagogy and Technology". Specifically, the focus of my study has been on "Social personalization in enhancing learner involvement in a collaborative context-aware learning environment". The study's experiment was carried out on three groups of students within their normal learning programs, in three higher institutions of learning - University of Gottingen being one of them. Therefore I would like to share my experience.

Diese Tagung wird gefördert im Rahmen der Projekte:

