Oklahoma Research Day Abstracts

2013 Oklahoma Research Day

Jan 1st, 12:00 AM

05. Information Operations Management

University of Central Oklahoma

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Abstracts from the 2013 Oklahoma Research Day

Held at the University of Central Oklahoma

01. Business Administration

05. Information Operations Management

01.05.01 Flipping Classrooms In Higher Education

Chris Graff, Joselina Cheng,

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Cyber security is a growing trend, and as such, requires new tools in order to engage learners in this field. This research focuses on finding new ways to engage students to best focus on their individual learning styles. Since the target is current collegiate students, the technology used focuses on what they currently have, or will have, available to them at the moment. The students in the study then answered questions in order to determine the effectiveness of the new teaching tools, and how they related to the learning satisfaction of the students overall. This shows us how the devices differed, and gives us insight into how comfortable students are with using new technology, instead of a traditional teaching method.

01.05.02 Student Learning Outcomes Assessment: Evaluate the Group, Not the Student

Ernst Bekkering, Julia Kwok,

Northeastern State University

University administrators are becoming more concerned about efficient allocation of resources due to budget constraints. External bodies, like accreditation reviewers, require demonstration of the effectiveness of the educational process. Student Learning Outcomes Assessment has become a major issue in education and is increasingly tied with accountability for use of resources. While higher education has not yet been forced to deal with standardized tests like in secondary education, outcomes assessment meets with other obstacles to demonstrate learning effects. Assessment has to be effective, relevant, cost-effective, and provide the ability to "close the loop." The current research proposal presents using pooling of randomly generated tests items from a larger test pool. While individual students are not tested on identical items, classes and groups are tested comparatively due to pooling of randomly assigned test items. The approach offers promise in the areas of coverage of the knowledge domain, using test methods that include baseline assessment and use of testing items other than multiple choice tests. Finally, pooling the results as presented eliminates the bias caused by low student retention.

01.05.03 Students Get Their Information From Where?

Tim Bridges,
University of Central Oklahoma

Universities are using many different media to communicate important information to students. It is hypothesized that they use the newer methods enabled by technology and that students are homogenous in their methods. But, where do students look for the information they need? Could their source depend upon the type of information they need or do they depend on just a few media to search for all their needs? This research utilized a survey to collect this information from students. The findings are varied.

01.05.04 Data mining for identifying students' difficulties in conceptual modeling

I-Lin Huang, J. Hsu,

Langston University

Conceptual data model is a process for building data models that are essential to building a well-functioning database. Conceptual data modeling has become a critical concern both in academia and in practice because the quality of database systems is critical for wide-spreading e-businesses and enterprise resource planning systems in current business environments. However, conceptual data modeling is an error prone process, especially for student database designers. Empirical studies have showed that the performance of student database designers is significantly lower than that of expert database designers. Educational data mining has been used to discover the relationships between students' mistakes and the co-occurring content. On the basis of the results, changes in teaching approaches can be suggested. In this research, a data mining approach is proposed to assist teachers to identify students' difficulties in conceptual data modeling. By establishing the measurements for students' errors and potential causes, the patterns for the relationships between errors and potentials are explored.

01.05.05 Student Learning Outcomes Assessment: An Example From a Business Communications Course

Ernst Bekkering, Julia Kwok,

Northeastern State University

Student learning outcomes assessment is one of the priority areas in higher education. Much assessment activity centers round the use of multiple choice questions, because non-multiple choice assessment is difficult to implement and manage. The authors present an example of a course subject better assessed with functional testing (Business Communications IS3113) and explain how competencies within the student learning outcomes can be assessed with baseline testing, embedded assessment during the course, and functional assessment during the final examination.

01.05.06 Electronic Signatures: The Time Has Come

Ernst Bekkering, David Madden,

Northeastern State University

The use of signatures for entering into agreements and signing contracts has significantly evolved over the centuries. In the electronic age, digital signatures have legal status but are underutilized. The authors discuss the evolution of signatures over the ages and demonstrate how digital signatures are currently used by the Northeastern State University Institutional Review Board (IRB).