EVALUATING PROCEDURAL KNOWLEDGE IN INFORMATION SYSTEMS STUDENTS

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Anderson (1982, 1993) proposed that individuals progress from possessing declarative knowledge to possessing procedural knowledge as they acquire cognitive skills. Since cognitive skill acquisition is an important part of an information systems (IS) education, it is proposed that evaluating IS students on both declarative and procedural knowledge within skill domains will provide several educational benefits to students and educators. This initial study examined whether an objective format (i.e., multiple-choice) examination on data modeling could discriminate between declarative and procedural knowledge in IS students. The subjects for the study were IS students in two different courses. One of those courses was a prerequisite for the other course, so students had had different levels of experience with data modeling. The results indicated that there was a significant difference in the performance of the subjects in both classes between the questions testing declarative knowledge and those testing procedural knowledge. Also, while there was no significant difference between the two classes in their performance on declarative-type questions, there was a significant difference in their performance on procedural-type questions. These results provide initial evidence that an objective format examination can discriminate between the two types of knowledge, providing educators and students with insight into the students' acquisition of the cognitive skills being taught.