DO STUDENTS STUDYING JAVA PERFORM BETTER IN SHORT ANSWER QUESTIONS OR COMPUTATIONAL QUESTIONS? – A CASE STUDY

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Abstract

There are numerous ways to assess students in a written Java test at University level. In this paper we try to determine whether students perform better in short answer type questions which test lower level cognitive skills or computational type questions which test higher level cognitive skills. Our case study is a Time Constrained Assessment for a level 5 module at Northampton University
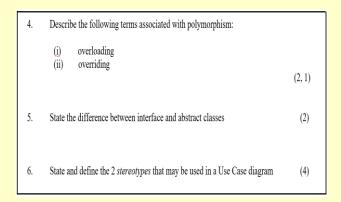
Figure 1: Examples of short answer question

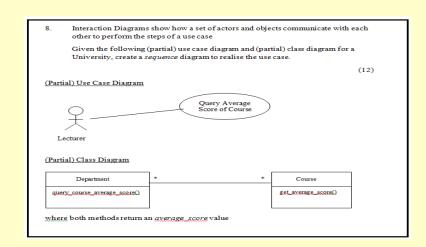Figure 2: Examples of computational question for java coding

Figure 3: Examples of computational question for creating a UML diagram

The TCA was made up of short answer questions and computational questions. Examples of short answer questions are shown in figure 1 and examples of computational questions are shown in figures 2 and 3. Of the 50 marks available for the TCA 35 marks were devoted to computational questions and 15 marks were devoted to short answer questions.

From 73 answer scripts the average mark for the computational questions was 20.47 out of 35 (58.49%) and the average mark for the short answer questions was 4.01 out of 15 (26.73%). This would indicate that students are more than twice more likely to perform better with computational questions than short answer questions.