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A Discussion and Students' Thoughts on the Assessment Methods used at the Tertiary Level

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Abstract Examiners administer examinations that are either objective, subjective or a combination of the two. Objective tests have one correct answer and are marked objectively. They are a popular choice with instructors because they are easy to administer and mark. Subjective tests have multiple different answers. The examiner uses their judgement to score such tests. Both of these approaches to assessment have their advantages and their disadvantages and the level of learning may influence which approach is used. The following paper discusses the advantages and disadvantages of both objective and subjective teaching and examines students' thoughts on assessment at the tertiary level. The advantages and disadvantages are looked at in regard to choosing an examination approach that would be suitable for university level students.

Keywords: objective, subjective, university, tests, examinations

Introduction

Educational instructors can administer three different types of examinations. Examinations can be objective, subjective or a combination of both. Objective tests have either a right or wrong answer so therefore can be marked objectively. Two such examples of objective tests are multiple choice or true or false. In contrast, subjective tests can yield various different answers to a question. This type of test usually requires the examinee to do a fair amount of writing. In regard to marking, the subjective test can result in a various range of possible answers. However, the answers given in a subjective test can be more accurate or acceptable than others. When marking a subjective test the examiner has to exercise their judgement. In addition, both objective and subjective questions are included in a combination examination (Ezekiel, n.d; Petrie, 2012). At the university level, students need to be assessed on their problem solving and critical thinking skills. However, objective tests are an adequate method for gauging students' progress within a course. This paper discusses the advantages and disadvantages of objective and subjective testing and also includes the results of a small scale survey of students' opinions of testing methods.

The Advantages and Disadvantages of Objective and Subjective Testing

Both types of examinations have their advantages as well as disadvantages. Therefore, the examiner needs to consider what they are attempting to test before applying either of the formats. There are several disadvantages for subjective testing. For example, students that display poor handwriting skills can be at a disadvantage in subjective testing. The examiner may be unable or even unwilling to mark the exam. On the other hand, a student may produce a well laid out, neatly written piece of work that contains poor content and receive a reasonably high score. The examiner could be influenced by the look of the paper and thus more inclined to ignore poor content (Clay, 2001; Snow,

Monk, & Thompson, 1996; Thompson, & Media, n.d). Certain students may write fluently and quickly and get their thoughts onto paper in a well written, easily understood manner. Other students though may struggle to get their thoughts and knowledge on the paper. In regard to longer written answers, students that are writing in a second language can also be at a disadvantage (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). Many subjective tests may require the student to only answer some of the questions. Examinees will therefore avoid questions in areas of the curriculum in which they are weak and lack knowledge. As candidates are free to choose a subset of their own questions, they are in some ways taking different examinations. This can make it difficult for the examiner to judge one candidate against another (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). Many students prepare for subjective tests by looking at past papers and questions that regularly occur can be spotted by the students. This can result in revision in only certain areas of the topic being tested (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). Possibly the greatest disadvantage to a subjective test is the inconsistency in the scoring. Certain examiners may have their own criteria of what is important. Furthermore, research has shown that examiners often give different marks on the same piece of work when re-marked at a later date (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d).

Several advantages for subjective testing have been noted. For example, at the university level it is important that students have the ability to put their work into a logical order. Subjective tests therefore allow the student to demonstrate their abilities in this respect (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). Subjective tests also give an opportunity for the candidate to express their own thoughts and opinions on a topic. The candidate can demonstrate their ability to develop an argument which gives the examiner a chance to assess the candidate's quality of written expression (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d).

There are several disadvantages for objective testing. For example, the candidate may know more than the question asks for which makes displaying greater levels of knowledge difficult. The candidate may have a good argument and an alternative answer but must choose the one that the examiner expects. The questions therefore only test for anticipated responses and cannot deal with creativity or unanticipated answers. It is possible to extend an objective test beyond factual information but it is difficult to devise questions for higher order thinking skills (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). The answers given in an objective test are marked either right or wrong, there is no in-between. It can therefore be time consuming to devise questions for such tests. Particular care needs to be taken to ensure that the questions are accurate, unambiguous and challenging. Distractors in multiple choice questions need to be plausible and be related to common errors and misconceptions. It is difficult to construct four good alternatives when writing multiple-choice questions. The possible answers may be too obvious, ambiguous or confusing (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). Examinations such as multiple-choice are often scored by machine. Care must be taken by the candidate to ensure that the paper is correctly filled in as it may be possible to incorrectly fill out the test paper. This would result in lost marks and lower overall grades for the student (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). One of the main issues with objective tests is that it is far easier to guess the answer. For true or false questions the candidate has a 50% chance of guessing correctly. More intelligent students are at a disadvantage because there would be fewer items that the candidate would be unsure about. Weaker students could guess and answer questions correctly and achieve a good grade (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). It can also be difficult to produce a test that relates to the course objectives. This may be more apparent when the examiner is looking for creativity or problem solving skills. Furthermore, the examiner must avoid

forming patterns in tests such as multiple-choice (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). There may be a temptation for the teacher to teach to the test. In other words, the teacher would concentrate solely on what would be required to obtain a good score in the exam. This approach can lead to a facts and figures rote memorization and superficial learning.

One of the main advantages of objective tests is their ability to cover a large amount of material. The test can be designed to cover a vast amount of questions in a short period of time. Although an answer for an objective test question may require recollection of knowledge there is no deep thinking required and thus can be answered quickly (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d). Objective tests are also quick and easy to grade and turn-around time is increased for both student and lecturer. Machine marked exams require little to no effort from the examiner. Machine marking and short turn-around times can also make objective tests cheaper to mark. Diagnostic data is easier to analyse as the results are unbiased as the instructors' preconceptions of a student's work cannot influence marking (Clay, 2001; Snow, Monk, & Thompson, 1996; Thompson, & Media, n.d).

Method

Forty four students at a Thai public university were surveyed on their opinions on testing at tertiary level education. The study used a 5 point Likert scale questionnaire. The results of the survey were analysed through descriptive statistics (percentages of response).

Results

The following section contains the results of the survey questionnaire and the descriptive statistics of the data (see Table 1).

Table 1. The results from the survey (Strongly Agree=5, Agree=4, Neutral=3, Disagree=2 and Strongly Disagree=1).

Statement	5	4	3	2	1
I like to use critical thinking skills	25%	54.55%	20.45%	0%	0%
I like problem solving questions	15.90%	40.90%	43.18%	0%	0%
Written tests show the instructor what I know	11.36%	59.09%	25%	2.27%	2.27%
Some instructors give higher scores	9.09%	47.72%	36.36%	4.54%	2.27%
I have bad handwriting	2.27%	36.36%	38.64%	18.18%	4.54%
I write slowly	0%	38.64%	29.54%	29.54%	2.27%
Multiple choice tests are too easy	15.90%	31.81%	38.64%	11.36%	2.27%
It is easy to guess multiple choice answers	13.63%	61.36%	25%	0%	0%

The results of the survey show a large number of students like to solve problems and use critical thinking skills. More than 60% agree or strongly agree that written tests can show the instructor a students' knowledge of a subject. Over 55% of respondents agree or strongly agree that some instructors give higher scores. Nearly 40% of students agree that they write slowly with a similar number suggesting they have poor hand writing. A large number of students feel that multiple choice questions are too easy and the answers can be guessed.

Discussion and Conclusion

One of the main criticisms of objective tests is that they simply test ability in factual knowledge or memory recall. This though can be used as an advantage to the lecturer during a course. The lecturer may use short tests and quizzes to gauge whether the class as a whole are having any difficulties in any particular area of the course. Objective tests can be used as part of the learning process (Pretorius, 2004). In Higher Education though, objective tests are generally not well received. The general perception of such tests is that they can test only surface or rote learning. In general, the higher the order of learning, the more difficult it is to construct useful assessment questions. Poorly designed questions are of limited value but with some thought it is possible to design questions that test higher levels of learning (Aiken, 1982). Although difficult it has been found to be possible to write questions that require students to think more deeply (“Assessment of Higher Order Skills”, 2002). Furthermore, some comprehensive examinations at postgraduate level use multiple-choice exams to test knowledge (Kuther, n.d). For example, questions can be formulated that present students with information such as data, diagrams, images and multimedia that requires analysis before a question can be answered (King, & Duke-Williams, 2001).

At university level all students should be forming their own ideas, interpretations and thoughts and not just regurgitating information. University students are expected to apply critical thinking skills when considering issues or problems within their specialised field. University level degrees train students to apply thinking to examine the theories and the practices that make up the professional knowledge in their subject. At university level the students would be expected to have developed a deeper understanding of their subject. They should have read beyond the core texts and be able to evaluate and analyse materials that are relevant to their area of expertise. The students should therefore have a wide range of knowledge and experience that they can use to formulate an argument or participate in a discussion. The use of subjective testing allows these types of skills to be assessed at the university level (Atherton, 2013; Bournier, n.d). In addition, the ability to produce clearly written easily understandable work is a skill that is needed at university level. In order for students to contribute to their subject field it is essential that they are able to clearly communicate ideas. Although poor presentation is seen as a disadvantage of the subjective testing method, it is vital that this skill is mastered (Vyncke, 2012).

A career in academia requires a lecturer to make judgements and conclusions on a regular basis. In the case of exam marking, one marker may disagree with another marker. They will both be using their backgrounds and knowledge to score a students work. The markers may have different beliefs and differing thoughts about what they would like to see as an answer. When dealing with higher level learning it is inevitable that disagreements will occur (Suksie, 2008). The disadvantages that are attached to the grading of subjective tests are a price that has to be paid so that greater levels of learning can occur. Without this form of testing, factual knowledge would be recycled from one generation to the next (Mueller, 2005).

The most appropriate method of student testing is determined by factors such as subject, program goals, objectives, learning outcomes and resources. Well-designed assessments and tests can assist in the learning process and should be on-going. At university level it is not only what students know that is important it is what they can do with that knowledge. Objective testing may be useful for low stakes quizzes and exams that test for knowledge. These can be used as a useful indicator for lecturers to gain an understanding of how the course is progressing. Most subjects though require the student to display knowledge and deeper thinking skills. Although in certain circumstances it is

possible to use objective testing there must be opportunities for students to display abilities beyond facts and figures. Generally speaking, subjective testing would be the more appropriate means of testing at university level. The perceived disadvantages related to presentation and facility in writing may be seen as advantageous for the examiner at university level. The subjective test can provide information on the candidate's skills in these fields. In some circumstances a combination of both approaches may be required. However, a student is tested it is important that the test provided is reliable, valid and fair and also tests for the skills that have been outlined in the course learning objectives.

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