EVALUATION OF THE QUALITY OF SUMMATIVE ASSESSMENTS IN SELECTED HOSPITALITY MANAGEMENT MODULES AT A UNIVERSITY OF TECHNOLOGY

D. CROWTHER AND H. BEZUIDENHOUT

Abstract

Higher education institutions have a responsibility to produce successful graduates; therefore, teaching, of which assessment is an integral part, must promote quality learning. This paper reports on an evaluation of the quality of summative assessments. A qualitative research design was used and a document analysis strategy was followed. Examination papers, memoranda and applicable learner guides were the primary data sources. Results showed that the assessment instruments studied mostly complied with the principles for assessment and the NQF level descriptors. However, it was found that only 10% of the marks allocated in the papers were allotted for items requiring higher order cognitive activity, and only 50% were aligned with outcomes and criteria found in the learner guides. It is therefore concluded that an improvement in the quality of summative assessment instruments is required.

Keywords: higher education; teaching and learning, summative assessment; quality of assessments; qualitative research.

1. INTRODUCTION

Due to the ongoing demands of transformation, higher education institutions (HEIs) are under severe pressure to remain stable and adapt to various structural changes since the early 1990s. The information revolution, competition amongst institutions, increasing class sizes, heavy workloads and changing student bodies also had an impact on these institutions (Wilkinson, Fourie, Strydom, Van der Westhuizen & Van Tonder, 2004:5). In addition, various stakeholders continuously demand change from the HEIs in order to satisfy their specific demands, while simultaneously they are required to achieve their individual academic missions (Wilkinson, et.al., 2004:27-28). Tight (2003:8) states that concerns about quality, standards and value for money increased as higher education systems in many countries moved towards mass education since the 1980s. The Education White Paper (3 of 1997) also identifies quality and the pursuit thereof in maintaining and applying academic and educational standards as one of eight principles in steering transformation in the higher education system (RSA DoE, 1997:12-13). The Council on Higher Education (CHE, 2004:4) provides three reasons why quality assurance of the assessment of student learning is of importance. First, assessment indicates whether students may successfully exit the system. Second, it measures the degree of success with which students have achieved learning outcomes.
Considering these grounds, it is sensible to mention that assessment influences, and even dictates, the quality of teaching and learning. Therefore, assessment can be or should be used as a powerful point of departure when aiming at changing and/or improving education.

Considering this, it can be argued that assessment is the teaching-learning practice that holds the highest stakes for students in terms of achievement. Therefore, the importance of assuring quality in terms of the accountability, transparency and rigor of assessment practices cannot be over-emphasised (CHE, 2004:6). The study focused on determining the quality of summative assessments in specific first-year modules at a university of technology in an endeavour to find ways to improve the quality of the assessment instruments used. The results might be used to improve the quality of the summative assessments of student learning in the relevant modules.

2. Teaching and Learning

The goals of the learning process are categorised in Bloom's Taxonomy of Learning Domains, as skills, knowledge and attitudes, described as three domains of educational activities, namely, the cognitive, the affective and the psychomotor domains (Clark, 2001:1). The taxonomy categorises cognitive mastery in six levels of increasing complexity. These categories are: knowledge (memorization), comprehension, application (lower order processes), analysis, synthesis and evaluation (higher order processes) (Clark, 2001:2-3; Smythe & Halonen, 2005:2). Biggs (2003: 9) advocates that good teaching occurs when students use higher level cognitive processes. Assessment should thus be developed in such a way that it requires of students to apply higher level cognitive thinking skills. Unfortunately, it is easier for lecturers to set questions at lower cognitive levels, requiring recall of facts, than setting questions requiring responses for which thinking at the higher cognitive levels of analysis and evaluation is required. This inevitably results in students relying heavily on rote learning (Ramsden, 1994:188).

A good teaching system is also characterised by the alignment of the teaching and assessment methods with all activities outlined in the objectives. Such a constructively aligned system compels students to use higher-order learning skills, and ultimately encourages the deep approach to learning in students (Biggs, 2003:11).

According to the Higher Education Qualifications Framework (HEQF) the first-year modules of a national diploma are pitched at Level 5 of the Framework. The draft South African Qualifications Authority (SAQA) level descriptors broadly describe the knowledge, skills and attitudes a student should have mastered at one level before moving on to a next.
Each level is described in ten categories, namely scope of knowledge, knowledge literacy, method and procedure, problem-solving, ethics and professional behaviour, accessing, processing and managing information, context and systems, management of learning and accountability. Student competencies are assessed in terms of the level descriptors for each of the ten categories (SAQA, 2007:19). Assessments should therefore ensure that the competencies described in the applicable level descriptors have been achieved.

Successful teaching-learning is greatly dependent on properly planned and constructively conducted student assessment (Elton & Johnston, 2002:4; Geyser, 2004:90). Troskie-de Bruin and Otto (2004:326) also suggest that assessment should be considered as part of the total learning process, while Race (1995:1) considers assessment of such importance in teaching and learning that he advises it to be the aspect of the profession that should be scrutinised most.

3. THE IMPORTANCE OF ASSESSMENT

Assessment is, or should be used to match current performance with desired performance (Biggs, 2003:142). It defines what students regard as important and influences how they will be spending their time. Assessment is also important to students, lecturers and those responsible for accreditation and developing courses (Brown, 2001:4). According to Geyser (2004:91) lecturers should use this powerful tool to influence the way students learn. Assessment is thus the teaching-learning tool by which most power can be exerted directly over what and how students learn (CHE, 2004:122).

3.1 Assessment criteria

In the outcomes-based education (OBE) system, outputs and outcomes are assessed (Geyser, 2004:103). Assessment criteria are used to identify performances that provide proof of what has been learnt, and how well (Biggs & Tang, 2007:177). Assessment criteria should first indicate the required, acceptable level of performance. A clear distinction should also be made between the expected satisfactory performance and performance assessed as unsatisfactory. These outcomes should then be used to determine whether a student has achieved the specified outcomes at the required level (Smit, s.a., s.p.).

3.2 Principles of good assessment

Good assessment is of great importance as the student, parent, employee, other learning institutions and the public are interested in the assurance that assessment results are credible. It is therefore vital that lecturers are mindful of the principles of good assessment. The Policy Document of the South African Qualifications Authority (SAQA) summarises these principles as fairness, validity, reliability, practicability and balance (SAQA, 2001:16-19).
Geyser (2004:92) adds the principle of credibility to ensure good assessment. *Fairness* concerns the issue that an assessment should not in any way hinder or favour the student. It should be an unbiased, fair and transparent opportunity, available to all learners (SAQA, 2001:16-17; Brown, 2001:6; Geyser, 2004:97). Smit (s.a., s.p.) adds that a fair assessment is balanced in terms of the time allocated, questions asked, the degree of difficulty and mark allocation.

For an assessment to be *valid*, the instrument, procedure, method and/or materials need to measure what it purports to measure (Brown, 2001:6; James, 1994:3; SAQA, 2001:17). The assessment procedures, methods, instruments and materials used must match the actual content that is being assessed (SAQA, 2001:17). It should also be appropriate for the population of students as well as the purpose for which it is intended (Rudner, 1994:1 of 6). For an assessment to be *reliable*, it has to be consistent in its measurement (SAQA, 2001:18; Smit, s.a., s.p.). When financial resources, facilities, equipment and time are taken into account when assessing, it must be *practicable* (SAQA, 2001:19). It should be possible for students to achieve the set tasks in the given period of time within the constraints of the assessment (Geyser, 2004:97). According to Geyser (2004:92) *credibility* can only be assured when assessment criteria are transparent, concise statements, describing the standards of successful performance, derived from learning outcomes (Geyser, 2004:95). The assessment process should be a well-planned and regulated exercise executed by all involved parties with sufficient insight in the assessment system (Geyser, 2004:96).

### 3.3 The purpose of assessment

A student needs to undergo assessment to obtain the right to progress to the next stage or graduate and improve his or her own learning (Brown, 2001:6). From assessment, students receive feedback to determine their progress and lecturers obtain valuable information on students’ learning, in order to improve and develop their teaching. The very fact that students are assessed motivates them to study. What may be even more important is the fact that employment is frequently primarily based on assessment outcomes (Biggs, 2003:141; Race, 1995:2; Ramsden, 1994:182).

### 3.4 Summative assessments

As the name implies, summative assessments are used to sum up achievement, serving a high-stakes purpose, as it may count towards a grade or mark shown on a certificate (Reddy, 2004:33). When teaching is completed, summative assessment takes place in order to determine whether students have achieved what they were supposed to. As the grade obtained is final, and as this grade may determine the future of the student, it usually results in the students fearing the outcome (Biggs, 2003:142). For this study, two sets of summative assessment instruments were evaluated, namely June and November examinations.
The June examinations covered the first semester module content, while the November examination was concerned the second semester content.

3.5 Quality assurance of assessment

When considering the extent to which summative assessments are used in universities, it would make more sense to rather improve these, than merely change the assessment method (Elton & Johnston, 2002:5). This would include that the accountability, transparency and rigor of assessment practices should be ensured, as well as the competence of staff to execute this responsibility in a professional manner (CHE, 2004:123). One quality assurance and maintenance method SAQA constituted was the moderation of assessments. This entails that quality and results of assessments are judged and it ensures that assessment of learning is conducted in a consistent, accurate and well-designed manner. The moderator needs to ensure that the assessment is conducted in terms of assessment criteria, through a variety of assessment methods, and that judgements on performance are made consistently (Murdoch and Grobbelaar, 2004:116).

Brown (1996:2) advises the use of an assessment system that supports quality assessments. Such a system emphasises assessment that is student-centred, rather than tutor-centred, focusing on what was learned, not what was taught. It provides students with transparent and meaningful assessment criteria and assesses what should be assessed, linked to the learning outcomes. It provides students the freedom to answer questions in an individualistic manner, rather than attempting to provide one single answer.

4. METHODOLOGY

A non-interactive qualitative research approach was followed, as McMillan and Schumacher (2006:27) suggest this as a preferred method to use in studies where the aim is the improvement of educational practices. They also suggest that a historical analysis involving the collection and criticism of documents should be used in such a study. As only summative assessment documents of the June and November 2007 examinations of selected Hospitality Management first-year modules were analysed without any face-to-face interviews, this can be seen as a non-interactive study. It would not have been a reliable study if assessment instruments compiled for future use were analysed, as the very fact that they would be evaluated, could influence the assessors in compilation of these instruments. The type of non-interactive research used was an analysis of historical documents (cf. McMillan & Schumacher, 2006:27).

This study was deemed as small-scale, and in this instance, according to Tight (2003:187) as a case study, as he describes a case study as a classic approach to use in small-scale research.
Yin (in Nieuwenhuis, 2007a:75) explains that such a design consists of one phenomenon on which the analysis is focused, and which the researcher wishes to understand in-depth (McMillan & Schumacher, 2006:316; Huysamen, 1994:169). The research strategy entailed a document analysis and evaluation. Document analysis is a reactive, non-interactive strategy of collecting data from official documents (McMillan & Schumacher, 2006:356-357), and analysing and evaluating them. In the case of this study, the documents were the examination papers and memorandums as well as the learner guides of the selected first-year Hospitality Management modules.

All examination papers and memoranda of June and November 2007 of the first-year modules in which summative assessments were used, were analysed. These were Hospitality Management I, Hospitality Financial Management I, Accommodation Management I, Service Excellence I, Food and Beverage Studies I and Hospitality Health and Safety I. It was also requested of the lecturers involved in these modules to provide the researcher with the Learner Guides of 2007 for the applicable modules.

An instrument was designed to use in conducting the document analysis, comprising the following sections (see Appendix I):

Section A is an adapted Test Blueprint (Smit, 2004:7), with additional space for evaluating the alignment of questions with predetermined outcomes. In section B the NQF level 5 descriptors (SAQA, 2007:2-3 of 9) have been listed according to which the compliance of questions in the examination papers was evaluated. Section C was used to evaluate whether the assessment was valid, reliable, fair and practical, which are the four NQF principles of good assessment (SAQA, 2001:16-19).

Data were gathered using the assessment instrument and organised into categories. These categories are: Principles of good assessment; Constructive alignment, Bloom’s taxonomy of the cognitive domain and NQF level descriptions. This assisted in the identification of patterns or trends within the categories after the analysis.

The credibility, validity and reliability of the study lie in the methodologies used and the report of data. To be trustworthy, a study should be reported as transparently as possible (Maykut & Morehouse, 1994:146). Adequate and detailed information was provided on the purpose of the study, sampling, specific aspects investigated, data collection and analysis procedures used, as well as the outcomes of the study. A detailed outline of the process and outcomes was given, increasing the trustworthiness (Chenail, 1995:2). The researcher attempted to build trust between herself and the lecturers involved by being honest about what the study entailed and what the aim was (cf. Chenail, 1995:2).
The researcher made no secret of the research purpose or plan as she explained it and discussed it with the staff.

This contributed to the openness and honesty in the study, which may also increase the ability of other researchers to undertake similar investigations in future (cf. Berg, 2004:63). Informed consent would include that participants are also informed about the importance and purpose of the study, the nature of the study, all aspects that may influence their willing consent, as well as their freedom to refuse participation in the study. Also advisable may be to explain to participants that the study is not concerned with individual performances, but with average trends discovered (cf. Huysamen, 1994:180).

Other ethical considerations attended to were informed consent, confidentiality and anonymity and the intended use of the results (cf. Berg, 2004:64; Huysamen, 1994:180; McMillan & Schumacher 2006:334). It was also explained to staff that the investigation was not focused on the performance or skills of the individual lecturers, but on trends found in the assessment instruments, to determine how the instruments, if found lacking, could be improved.

5. FINDINGS

After the data had been collected, analysed and interpreted the following results were obtained:

Principles of good assessment

Using SAQA's definition of the four principles of good assessment, the researcher evaluated the examination papers for validity, reliability, fairness and practicability. All the papers were found valid as it was found that they measured what they were supposed to measure. Written examinations were found to be an appropriate method to assess the outcomes, and the papers were found appropriate for the student population for which they were compiled. Two of the papers were considered as not being fair or practicable as the time allowed for completion was insufficient.

Constructive alignment

To determine whether the items contained in the examination papers were aligned with the outcomes and assessment criteria provided to students, the researcher compared the content covered and the outcomes and criteria provided in the learner guides with the assessment items. Six of the twelve examination papers dealt with content completely covered in the learner guides. The questions asked in one of the papers were covered only 28%, while the remaining five examination papers were on average covered 73,8%. Six of the twelve examination papers were aligned with the outcomes and criteria provided in the learner guides. One of the papers was 21% aligned, while the remaining five papers were on average 80% aligned.
Blooms Taxonomy of the cognitive domain

When an average percentage of the focus on all six cognitive levels in the examination papers was calculated, it came to light that 90% of the marks of all the examination papers addressed the three lower cognitive levels (memorisation, comprehension and application). The other 10% of the marks were pitched on testing at the higher cognitive levels (analysis, synthesis and evaluation). On average only 2% of the marks of the examination papers were focused on the analysis level. Seven of the twelve papers had no question or part of a question that was pitched on the analysis level. The same trend was seen with the two highest level categories as only 7% and 1% of all the examination papers contained items pitched on the synthesis and evaluation levels respectively (see Figure 1).

![Pie chart showing distribution of cognitive levels](image)

**Figure 1:**
Average emphasis of summative assessments on Bloom's Cognitive Domain Levels

**NQF level descriptors**

The papers were found to comply with the scope of knowledge category. Two of the twelve papers complied with on the descriptors of the method and procedure category. Only one of the papers did not test whether the students had the ability to solve problems. The other papers had questions requiring of the student to solve a problem and apply a solution.

6. CONCLUSIONS

Based on the findings it is clear that improvement of the quality of summative assessment instruments at the department concerned is indeed necessary. Although the assessment instruments that were evaluated were considered as valid and suitable for assessing the predetermined module outcomes, as well as suitable for the student population, it was found that two of the papers were not fair or practicable.
This conclusion was made when considering the time allocation for completion of the paper. It may be concluded that some staff members have not calculated the time it would take students to complete their papers.

To be valid an assessment must measure what it is supposed to measure (SAQA, 2001:17). It was found that the information required for 50% of the questions asked in the papers was provided or discussed in the learner guides and items were aligned with the outcomes and assessment criteria provided. It may thus be concluded that based on the evidence in the assessment papers lecturers need to be made aware of the principle of validity of assessment and the importance of alignment of assessments with outcomes.

When considering the focus of assessment items on specific cognitive levels, it was found that only ten percent of the marks in the examination papers were allotted for responses that required of students to operate at higher cognitive levels (analysis, synthesis and evaluation). Only two percent of marks were allocated to items requiring analysis. This is a startling result, as it is known that good teaching, and therefore deep learning is achieved when students apply higher level cognitive processes. If summative assessments are not compiled to require of students to apply the higher level cognitive skills, it may be assumed that the same applies to formative assessments, resulting in lecturers fostering a surface learning culture. This may result in students graduating from higher education establishments without having mastered the crucial skills of analysis and synthesis, evaluation and critical thinking, and the ability to apply knowledge in different contexts.

7. **RECOMMENDATIONS**

It is recommended that lecturing staff be made aware of the important role of assessment in ensuring the quality of the teaching-learning process. Academic staff members who have not undergone training in teaching-learning and assessment may inadvertently do the students an injustice if their assessments are not valid, reliable, fair and practicable. The extent of the answers required from students in order to be awarded the allocated marks and the time allocation for completion of the examination paper should be matched to ensure fairness and practicability of the assessment. Ensuring that the memorandum is complete to such an extent that any other assessor could apply it under the same conditions and reach the same results will increase the reliability of the assessment. Lecturers should also take cognisance of the SAQA NQF levels and through assessment ensure that students comply with the requirements for one level before they proceed to the next level.

It is recommended that lecturers be required to use the test/examination blueprint (Smit, 2004) to ensure and/or improve the quality of their instruments.
This instrument provides guidance to facilitators on setting assessment instruments according to the level of the cognitive domain at which students will be tested. Assessment items should be compiled in such a way that it will be impossible to answer them in full by only recalling knowledge.

Lecturers must keep in mind that they have to prepare students for the industry, an industry with real challenges and demanding of students to solve problems independently. Therefore, they must teach and assess in such a manner that students need to think for themselves and make meaning of information instead of merely memorising it. That way they will be able to solve problems on their own, apply knowledge in varying contexts, and be critical and creative thinkers.

8. REFERENCES


## APPENDIX I
Assessment sheet: Analysis of assessment instrument

**Question Paper:** ..........................................................  **Date:** ..............................................................

**Section A:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Marks</th>
<th>Emphasis in module by approximation (%)</th>
<th>Aligned with outcomes and assessment criteria (Yes/No)</th>
<th>Memorisation</th>
<th>Emphasis in cognitive domain (Bloom’s Taxonomy)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Comprehension</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Application</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Synthesis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Evaluation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBTOTAL (marks)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total marks of assessment

---

Figure 1: Adapted Test/Exam Blueprint (Smit, 2004:7).
SECTION B:
Mark with an X whether the appropriate level descriptor(s) has been complied with in the module.

<table>
<thead>
<tr>
<th>NQF LEVEL DESCRIPTORS:</th>
<th>NOTES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL 5</td>
<td></td>
</tr>
<tr>
<td>Scope of knowledge</td>
<td></td>
</tr>
<tr>
<td>Knowledge literacy</td>
<td></td>
</tr>
<tr>
<td>Method and Procedure</td>
<td></td>
</tr>
<tr>
<td>Problem Solving</td>
<td></td>
</tr>
<tr>
<td>Ethical and professional practice</td>
<td></td>
</tr>
<tr>
<td>Accessing, processing and managing information</td>
<td></td>
</tr>
<tr>
<td>Producing and communicating information</td>
<td></td>
</tr>
<tr>
<td>Context and systems</td>
<td></td>
</tr>
<tr>
<td>Management of learning</td>
<td></td>
</tr>
<tr>
<td>Accountability</td>
<td></td>
</tr>
</tbody>
</table>

(SAQA, 2007:2-3 of 9)
SECTION C:
When considering the examination paper and its memorandum, can the assessment be described as:
(Mark the answer with an X.)

<table>
<thead>
<tr>
<th>Valid?</th>
<th>Yes</th>
<th>No</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The assessment measures what it says it is measuring (SAQA, 2001:17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliable?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also referred to as consistency. The same judgements being made in the same, or similar contexts each time a particular assessment for specified stated intentions is administered (SAQA, 2001:18)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair?</td>
<td>Yes</td>
<td>No</td>
<td>Notes:</td>
</tr>
<tr>
<td>The assessment should not in any way hinder or advantage a learner (SAQA, 2001:16).</td>
<td>Yes</td>
<td>No</td>
<td>Notes:</td>
</tr>
<tr>
<td>Practical?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensuring assessments take the available financial resources, facilities, equipment and time into account (SAQA, 2001:19).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional notes:


References

