Full Length Research Paper

Students' perceptions about the impact of continuous assessment in learning physiology in Sudanese Faculty of Medicine and Health Sciences

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Assessment drives learning and one of the major motives for the students to study is the preparation and conduct of examinations. Educators are always concerned with how students gain knowledge and skills about the subject. Recently in our school, a system of continuous assessment has been adopted and implemented. Accordingly, the students have undergone 11 end module tests (EMT) in physiology subject instead of 3 end semester tests (EST) as before the system being implemented. The overall aim of this study is to investigate the students’ perceptions about the effectiveness of the newly adopted continuous assessment system. A standardized Self-administered questionnaire was developed and used for data collection from the students who have undergone 11 end module tests of physiology subject. It was observed 89% of the students stated that (EMT) help them in learning the module and it is more effective than (EST). 82% stated that EMT help them to study seriously. Only 19.7% perceive the EMT as extra burden for them. 60% of students stated that there is no enough time between the end of the module and the test. Also, 60% of them perceived that multiple choice questions are the best method of evaluation. 76.4% are of the opinion that continuous assessment should constitute less than 50% of the final evaluation. Thus, continuous assessment is an effective method in motivating the student to study physiology. However, further modifications can enhance its effectiveness like adding other assessment methods and scheduling the tests to provide the students enough time to study.

Key words: Continuous assessment, physiology, perception.

INTRODUCTION

Assessment drives learning (Cooke et al., 2006) whether it is formative or summative, the main task of assessment is to gather data about each student’s performance (Miller, 1976). Students adapt both what and how they learn so as to meet the assessment’ requirements (Newble and Jaeger, 1983). The main goal of assessment is to enhance learning among students (Cilliers et al., 2012).

Alneelain Faculty of Medicine and Health Sciences is a governmental college funded mainly by the Sudanese Ministry of Higher education. The faculty curriculum is traditional and physiology is taught to students of medicine, dentistry and physiotherapy since they study together in the first two years in school.

According to the curriculum of Alneelain University-Faculty of Medicine and Health Sciences, physiology subject is taught within the preclinical phase in semesters II, III and IV. The assessment system has been subjected to revision and change as part of the faculty policy to improve the overall educational system. The continuous assessment is composed of two end semester examinations (II and III). The eligibility of the students to proceed to the next academic year is based on the results of assessments at the end of semester IV. The continuous assessment represents 10% of the final evaluation. Since the introduction of the EMT two years
ago, the students have been subjected, after each module, to test in the subject materials. Each test is composed of 20 multiple choice questions. For each question, the students are supposed to select the single best answer out of five choices. By the end of the three semesters, students would have been subjected to 9 EMT, in addition to the two EST. The total scores of the nine EMTs represent 30% of the overall final evaluation.

The design of the present system was implemented to stimulate continuous and effective learning (Cilliers et al., 2012). And the students tend to allocate extra time for learning more often than in the past. Once students recognize that continuous assessment is an integral and important part of the learning; they consciously or subconsciously change their attitudes and strategies of learning to cope with the assessment system (Newble and Jaeger, 1983). On the other hand, educators are concerned about the impact of continuous assessment using simple induction of shorter cycles of surface-learning to pass the test (McLachlan, 2006) without remarkable in-depth knowledge about physiology.

The overall aim of this study was to investigate students’ perception about continuous assessment.

METHODS

A faculty-based descriptive study was conducted at the Alneelain Faculty of Medicine and Health Sciences, Khartoum, Sudan.

A standardized self-administered questionnaire with 14 closed ended questions and one open-ended question was developed, pre-tested and validated through self-administration by the 5 upper class students. The students were selected from the Faculty of Medicine and Health Sciences. However, their responses were not included within the study results. Then the questionnaire was revised, corrected, finalized and used for data collection. Questionnaires were distributed to the students from different schools after the last end module test, questionnaires were returned back for analysis. The questionnaire focused on: students' perception of effectiveness of the new system of continuous assessment used in physiology, the preferred way of learning to cope with the assessment system (Newble and Jaeger, 1983). On the other hand, educators are concerned about the impact of continuous assessment using simple induction of shorter cycles of surface-learning to pass the test (McLachlan, 2006) without remarkable in-depth knowledge about physiology.

The data were analyzed using SPSS version 16 and p value < 0.05 is considered significant.

RESULTS

Out of 195 students that participated in this study, 65.5% of them are medical students (Table 1) of which 66% of them were females.

A breakdown of the answers to the questions asked is given in the Table 2, taking the 195 replies as 100%. Not all respondents answered all questions. However, the number of missing answers was insignificant.

The students were questioned if they think the current test format (MCQs) is best method for evaluation (Figure 1). In addition, the students who responded "No"(77 respondents), were questioned about the suitable test format favored by them. Their responses scores showed highest for short notes, while the oral test showed the lowest score (Figure 2).

Finally, we investigated the students' opinion about the percentage of the continuous assessment constituting the final evaluation, 40% of the students stated that it should constitute 10% of the final evaluation (Figure 3). However, the students who responded that the end module test is better than the end semester test stated that continuous assessment should constitute higher proportion of the final evaluation (Table 3).

DISCUSSION

Most of students agreed that EMT is useful in learning the course and clarify the weakness of the students better (88.7 and 83.1%). The students perceived that EMT helps them to study the module seriously (82.1%) and this is the main concern for us as teachers (Epstein, 2007). Nevertheless, 68.2% of the students stated that EMT increases their marks in the final examinations, which is the main concern for the students (Raupach et al., 2013).

More than 50% of the interviewed students state that neither time of the test nor the number of questions is satisfactory for evaluation. This is understandable, given that the test follows the module shortly and interferes with tests from the other subjects, making time management a difficult task for the students.

Continuous assessment was initially summative as at when it was introduced, however it has been changed to formative; and test revisions were regularly conducted after the test. Moreover, only about 16% of the students stated that the teacher’s feedback and test revisions are not helping in answering the final examination (Table 2). Useful feedback should be constructive and the teachers should be well trained (Hudson and Bristow, 2006; Larsen et al., 2008). 60.5% of students declare that multiple choice questions is the best method of evaluation and in fact, multiple choice questions is usually preferred by the teachers since it is easy to prepare (Epstein, 2007). In addition, multiple choice

<table>
<thead>
<tr>
<th>School</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>127</td>
<td>65.5</td>
</tr>
<tr>
<td>Dentistry</td>
<td>38</td>
<td>19.6</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>195</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1. Student distribution by schools.
Table 2. Students’ responses towards end-module test.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-End module test helps you in learning the module</td>
<td>173 (88.7%)</td>
<td>19 (9.7%)</td>
<td>3</td>
</tr>
<tr>
<td>2-End module test help you to study seriously</td>
<td>160 (82.1%)</td>
<td>35 (17.9%)</td>
<td></td>
</tr>
<tr>
<td>3-End module test help you to clarify your weakness in the module better</td>
<td>162 (83.1%)</td>
<td>33 (16.9%)</td>
<td></td>
</tr>
<tr>
<td>4-End module test is better than end semester test</td>
<td>174 (89.2%)</td>
<td>21 (10.8%)</td>
<td></td>
</tr>
<tr>
<td>5-End module test is extra load for you</td>
<td>38 (19.7%)</td>
<td>155 (80.3%)</td>
<td></td>
</tr>
<tr>
<td>6-End module test helps you to increase your grades in the final exam</td>
<td>133 (68.2%)</td>
<td>57 (29.2%)</td>
<td>5</td>
</tr>
<tr>
<td>7-Number of questions is enough for evaluation</td>
<td>73 (37.4%)</td>
<td>120 (61.5%)</td>
<td>2</td>
</tr>
<tr>
<td>8-There's enough time between end of the module and the test</td>
<td>77 (39.5%)</td>
<td>118 (60.5%)</td>
<td></td>
</tr>
<tr>
<td>9-Teacher Feedback and test revisions are not helping you in answering the final examination</td>
<td>32 (16.4%)</td>
<td>162 (83.1%)</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Multiple choice questions are the best format for continuous assessment.

Figure 2. The assessment methods preferred by the students other than the MCQs.
questions proved to be an effective method to test the higher cognitive functions (Palmer and Devitt, 2007). On the other hand, multiple choice questions formulation is time consuming and requires resources to be constructed without flaws (Downing, 2002; McCoubrie, 2004). Also, it is necessary to establish a large questions bank to avail questions for the frequent testing (Cruickshank et al., 1975).

Nevertheless, our students are still acquainted with the traditional assessment system where the cornerstone is the final examination, less than quarter of students sought CA to constitute more than 30% of the final evaluation and only 7% believe continuous assessment should weight more than final examination in the evaluation system (Figure 3).

**Conclusion**

EMT is a useful method, as perceived by most of the students, to facilitate physiology learning, since it motivates them to study each module separately. In addition, it enables them to monitor their learning progress and define their weaknesses and gabs. Still, CA needs more adjustments and modifications to enhance its effectiveness particularly, the time and format of the test.

**ACKNOWLEDGMENT**

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**REFERENCES**


