

The impact of continuous assessment on the final results a case study: College of Medicine, King Khalid University

Assad Ali Rezigalla,
Asim Mohammed Abdalla,
Syed Javed Haider,
Qurashi Mohammed Ali¹,
Muntaser Mohammed
Alhassen²

Department of Anatomy, College of Medicine, King Khalid University, Abha, Kingdom of Saudi Arabia, ¹Department of Anatomy, Faculty of Medicine, National University, ²Department of Anatomy, Faculty of Medicine and Health Sciences, Gadarif University, Al Qadarif, Sudan

Abstract

Introduction: Assessment is a dynamic and multi-faceted process with variable aims. The assessment can be continuous, a final examination or a combination of both. The method of assessment *per se* is not the target, but its impact on student learning is the important. The method or the tool of assessment modulates the student's methodology of learning. **Aims:** The aim is to study the effect of the continuous assessment (CA) on the final result (FR) of students. **Study Design and Type:** Retrospective cross-sectional type. **Materials and Methods:** Student's scores were obtained from students' results of the CA, the final assessment (FA) and the FR. Statistical package for social sciences (SPSS, version 20) was used for data entry and analysis. Descriptive statistics and inferential statistics were applied. **Results:** Both CA and FA show a high level of correlation with the FR and it was higher with the CA. Correlation confident was higher between CA and FA than between FA and the FR. *t*-test showed a significant difference between the CA, FA and the FR. **Conclusion:** Continuous assessment has an impact on both the student's results and their methodologies of learning. Serious attention should be directed towards the tools that are used in the CA. Training of teachers in both exam settings and implementation is important as they have a direct effect on the methodology of assessment.

Key words: Continuous assessment, impact, student assessment, success rate

INTRODUCTION

Assessment is a dynamic and multi-faceted process with variable aims.^[1] It is used to in find out how much student has acquired in terms of knowledge and learning skills.^[2] The assessment can be continuous, final examination or a combination of both. The method of assessment *per se* is not the target^[3] but its impact on student learning is the important.

The principal rationale behind the continuous assessment (CA) is to enhance the quality of education

by ensuring that students do not wait for the end of the semester or term to exert study efforts. It is designed with the aim of sustaining quality of learning throughout a period of semester or term. In this respect, the CA is more important than the final examination as it keeps students' learning as an on-going process and helps the retrieval of knowledge.^[4-6] The CA is supposed to relieve the pressure of examination as it accounts for a percentage.^[2] This fact determines that the CA has an impact on the overall student's performance.^[2,7,8] The weight of the CA from the final examination varies from 10%^[9] to 30%^[2,8] and 50–60%^[2] or even used as a system of student assessment as are placement to the final examination.^[10]

Continuous assessment as a method of assessment has important advantages^[2] such as a guidance orientation, can diagnose areas of weakness, promotes frequent interactions between students and teachers, and it's a class room assessment. Disadvantages and problems of

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10.4103/1858-5000.153029

Address for correspondence:

Dr. Assad Ali Rezigalla, Department of Anatomy, Collage of Medicine, King Khalid University, Abha, Saudi Arabia. E-mail: assadkafe@yahoo.com

CA are associated with both the academic staff and the implementation in the universities. These problems include the staff skills in test construction and administration, their attitude toward CA and student's loss of interest as they are being examined continuously.^[2]

This study will not discuss the priority of CA over other methods of assessment but declares its impact.

MATERIALS AND METHODS

This study is a retrospective cross-sectional type uses correlational method to establish the study measures.

Background

The college of medicine (King Khalid University, KSA) had adopted the CA as part of the student's assessment. The CA accounts for 50% of the overall student's score. It includes quizzes and assignment. Any student score of 50% or more is considered to be succeeding in the CA. The final assessment (FA) represents 50 marks and the final result (FR) is calculated by adding the CA and the final examination thus mounting to 100 marks.

Materials

Student's scores were obtained from students' results of the CA, the FA and the FR. This study applied on students in the course of anatomy 213 level four for the academic years 2013–2014 (Group one) 61 students and 2014–2015 (Group two) 83 students. Inclusion criterion applies to all students who appeared for both the CA and the FA. Excluded are those students who missed any or both assessments.

Statistical analyses

IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp (USA) was used for data entry and analysis. Descriptive statistics and inferential statistics, that is, *t*-test, regression analysis and Pearson correlation co-efficient were applied to measure the significance of difference and correlation among different variables. Level of significance was fixed at 95% and any $P < 0.05$ was considered to be significant.

RESULTS

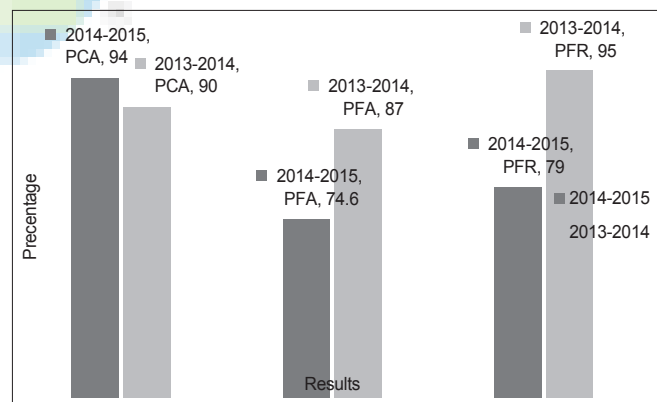
Success rates of CA for group one and group two were 90% and 94%, respectively. Numbers of students passed both the FA and FR were higher in group one than group two [Graph 1].

Both CA and FA show a high level of correlation with the FR and it was higher with the CA ($P = 0.0001$).

Correlation confident was higher between CA and FR than between FA and the FR. *t*-test showed a significant difference ($P = 0.0001$) between the CA, FA and the FR in both of group one and two [Table 1]. By applying stepwise regression analysis, CA in group one (0.57) has more impact than FA (0.51) on the FR. This relation was opposite for group two. In group two, the CA (0.50) produces impact than the FA (0.53) on the FR [Table 2].

DISCUSSION

This study is not intended to advise the uses of CA or determining its priority among the other methods of assessment. This is because the assessment method or tools is not the target but its impact on the students and the learning process is the goal. Students modify learning according to the method of assessment that used by the assessor.^[11] Through the CA system of assessment, the



Graph 1: The different percentages of success rates of the students in the study. P: Pass, CA: Continuous assessment, FA: Final assessment, FR: Final results

Table 1: The statistical analysis of the student's results for the CA, FA and the FR

Groups	Variables	r	r ²	r ² %	P	Decision
Group two	CA versus FA	0.7524	0.566	56.6	0.0001	Significant
	CA versus FR	0.9364	0.876	87.6	0.0001	Significant
	FA versus FR	0.9211	0.848	84.4	0.0001	Significant
Group one	CA versus FA	0.857184	0.73476	73.40	0.0001	Significant
	CA versus FR	0.96553	0.93224	87.60	0.0162	Significant
	FA versus FR	0.96169	0.92485	84.80	0.0001	Significant

CA: Continuous assessment, FA: Final assessment, FR: Final results

Table 2: Stepwise regression analysis of the student's results for the CA, FA and the FR

	Unstandardized coefficients	Standardized coefficients	P
Group one	CA	0.56	0.0001
	FE	0.51	0.0001
Group two	CA	0.53	0.0001
	FE	0.50	0.0001

CA: Continuous assessment, FA: Final assessment, FE: Final examination, FR: Final results

students are continuously under assessment and on an ongoing process of learning.

Continuous assessment can cause an effect on the FR of students in two ways: The first is by the percentage it accounts for on the overall student assessment. In this concern, the percentage of CA varies according to the variations in medical school curricula or the administrations that governs the assessment in general. In literature, the percentage of CA ranged from 10%^[9] to 60%^[2] or even being the single method of assessment^[10] without FA. The second is the student's overall achievement. Student's achievement is influenced by the amount of knowledge of skills being tested or the tools or the instrument that used in the CA. According to Van der Vleuten and Schuwirth,^[3] the CA is valid as an instrument that measures what is purposed to be assessed. Trottera^[12] reported that CA encourages students to learn on an-going basis. This manner of learning provides a feedback to the students about their learning^[13] and enables teachers to know the areas of strength and weakness of the learners, and interfere with it.^[14] CA includes all strategies implemented by teachers to a certain the knowledge, the understanding and the skills gained by students.^[2] Furthermore, it is the frequent interactions between teachers and students that enable teachers to know the strength and weakness of the learners.^[14] Despite of all these, this study deals with CA as a result without concerns on the tools or the instruments that were used.

The Proportion of success in CA is more than FA, is due to the fact that CA is formed by multiple short assessment tools. These tools usually target a limited amount of knowledge or required skills. Carrillo and Pérez^[6] reported that CA is associated fewer numbers of course drop and improvement of the academic achievement of students. Student's achievement in CA may be influence by mal-practice of the CA^[2] and the students' achievements in their academic activities. Mal-practice includes what is associated with the academic staff such as test constriction, administration and implementation; and those associated with attitudes toward the CA. These can lead to unreliable results.

The increase in the success rates for the CA is associated with high success rates in the FR [Graph 1]. This suggests that the CA can predict the students' performance of the FRs. María^[11] reported that the success rates of students on the CA are greater than the FA. The present study supported the work of María^[11] and showed that high success rates in the CA are associated with the FRs and the student's achievements were better than the FA.

The high percentage of correlation between both CA and FA with the FR is justified since both are included in the FR. The CA shows higher level correlation and this demonstrates a greater impact on the FR. Many studies^[8,7,11] and the present study showed the CA had an impact on the FR of students. This impact demonstrated as the high correlation between the CA and FR and the presence of significant difference between both. Correlation confident between CA and the FR supports these findings [Table 1].

CONCLUSION

Continuous assessment has an impact on both the student's results and their methodologies of learning. Serious attention should be directed towards the tools that are used in the CA. Training of teachers in both exam settings and implementation is important as they have a direct effect on the methodology of assessment.

ACKNOWLEDGMENT

The authors acknowledge the effort of Dr. El. Mekki A. Great thanks to Mr. Abid MI for the statistical analysis and the helpful comments. The comments of Dr. Kameir H are highly appreciated. Special thanks to Professor M. Atiff. College dean and administration of the college of medicine (KKU, KSA) are appreciated for help and allowing the use of facilities.

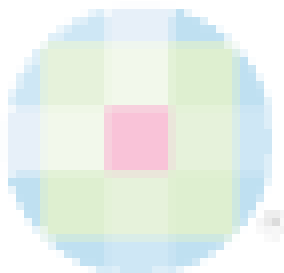
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How to cite this article: Rezigalla AA, Abdalla AM, Haider SJ, Ali QM, Alhassen MM. The impact of continuous assessment on the final results a case study: College of Medicine, King Khalid University. *Sudan Med Monit* 2014;9:149-52.

Source of Support: Nil. **Conflict of Interest:** None declared.



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