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Making TMAs Meaningful: An Evaluation of the Online Assessment Within a Blended Learning System

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Abstract

The paradigm shift in higher education brought about changes in the conventional assessment practices. One of these changes is the introduction of Tutor Marked Assignments (TMAs) which constitute part of the overall continuous assessment score (OCAS) at the Arab Open University (AOU). This assessment tool has provoked much controversy among academic staff members throughout the AOU branches. Several hurdles have met this type of assessment contributing to its loss of validity and reliability of marks. In order to analyze this assessment policy, tutors' views in three disciplines (English Language and Literature, Business Studies and Information Technology) have been sought through a survey research. This paper is a quantitative research based on empirical investigation to reach causal associations through statistical findings of the survey on the educational value of TMAs.

Keywords: *Feedback, formative assessment, Online Assessment/ TMA/ Blended learning.*

Introduction

Since the establishment of AOU at 2002, the demand for higher education has been increasing. Students' enrollment has been growing to reach more than 8000 students at Kuwait Branch and above 30,000 students at all branches. The AOU adopts the blended learning system with a compulsory face-to-face tuition component comprising 25% of physical tutorial sessions, and 75% of supported self-learning that addresses the academic and vocational needs of students. Likewise, within this blended learning environment, assessment is divided into an OCAS which comprises an online TMA and an in-class MTA followed by a Summative assessment in the form of an in-class Final Examination. These dual approaches to teaching and to assessment have been blended to fulfill the local accreditation criteria, and the affiliated Open University standards. Learning is facilitated through a university wide Learning Management System (LMS) based on the open source software Moodle.

Within this blended learning system, pedagogical approaches to teaching and assessment differ from the traditional conventions in which this system brought about significant challenges. One of the most important open learning assessment tools is the online formative assessment (TMA). The debate over the validity and reliability of TMAs is still a critical concern that affects negatively the time invested by the faculty members at all AOU branches. This study is unique in that it analyzes the factors that render formative assignment more meaningful, and more important is to search for some solutions establishing what needs to be done to make the TMA more meaningful, establishing where learners are going and establishing what needs to be done in order to invest the tutors' time more efficiently without compromising the learning outcome.

To address these issues, this study will examine the tutors' perceptions using a descriptive research method and compare the survey's findings with up-to-date literature related to formative assessment within blended learning environment. Recommendations will be summed up to for AOU officials to revisit the assessment tool. This pilot study calls for further researches that aim to make the TMA more meaningful, more valid and more reliable.

Methodology

The objective of this study is to examine the perceptions of faculty members in the three programs regarding the quality, effectiveness and learning outcomes of TMAs prepared by the students at AOU – Kuwait Branch. A descriptive research was used for this study through a designed four point Likert scale questionnaire along with individual interviews to assess the academic value of TMAs. Twenty one out of nearly sixty full time staff members in the three programs have responded to the questionnaire, about 35%. Their experience in the blended learning system ranges from 1-10 years (Mean=5.5). The questionnaire had been reviewed by some colleagues before it was administered. The ten questions listed in this questionnaire were developed as a result of an analysis of previous studies, discussions with faculty members and students. Table 1 below shows frequency results obtained with respect to the ten research questions.

Table 1: Responses of faculty members to TMA's questionnaire.

Questions		Strongly Agree	Agree	Disagree	Strongly Disagree
Q1	AOU students are well prepared to tackle TMAs	1	5	12	4
Q2	AOU students need a course on research methodology before they are assigned TMAs	13	7	2	0
Q3	Students depend on themselves to answer their TMAs.	0	0	9	13
Q4	The AOU has a good infrastructure (e-library- physical library…) conducive to research.	3	8	11	0
Q5	TMAs add academic value to our students' learning experience.	1	6	11	4
Q6	TMAs enable the students to acquire analytical/critical skills.	2	5	9	6
Q7	TMAs take much longer to grade than in-class assignments.	17	4	0	1
Q8	It is more constructive to have students give oral in-class presentation of their TMAs.	8	8	5	1
Q9	It would be more beneficial for students to have their TMAs replaced by in-class assignments like the EL111/112.	11	7	4	0
Q10	From your experience, TMAs be eliminated from the assessment.	14	3	4	1

Background Literature

This study is trying to analyze the degree to which the formative assessment (Tutor Marked Assessment (TMA)) at AOU can be more meaningful for the student learning objectives within the blended learning system. There are many studies about online or formative assessment. One of these studies clarifies that "*for an assessment to be formative, it requires feedback which indicates the existence of a 'gap' between the actual level of the work being assessed and the required standard. It also requires an indication of how the work can be improved to reach the required standard."* This type of online assessment is found to play the major role in open learning. Considerable amount of time is invested by tutors to provide intensive feedback.

Hartman, Dziuban, and Moskal (2000) [1] implemented a survey for 32 online tutors and found that nearly 90% of them consider that online courses need more effort and time to teach. Other studies (Lazarus 2003) [2] support these findings and found that individual interaction between tutor and student takes a significant amount of time. Furthermore, (Farahani, 2003) [3] found that interacting with students via email communication and providing formative feedback to students' work are the two most important aspects of online interactivity.

William and Thompson (2007) [4] suggested that three processes must be centered: Establishing where learners are in their learning, establishing where they are going and establishing how to get there. For the case of AOU, the tutor is not responsible for these three issues, they are the jurisdiction of the deanship or high officials.

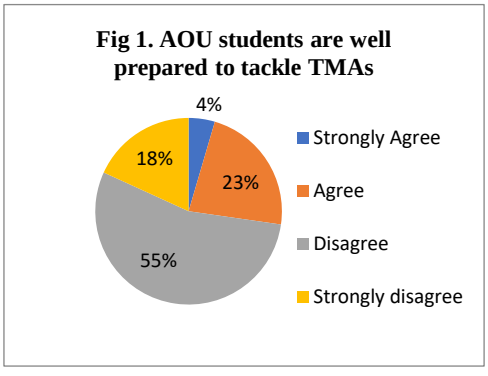
Nejdet Karadg (2023) [5] addressed the opportunities and threats of AI on online assessment where he aligned the threats of academic integrity with the opportunity of improving assessment. He believes that academician need to revisit their assessment strategies and improve it in light of the evolving academic landscape.

Findings and Discussion

Table 1 above shows the frequency responses of faculty members in the three programs: FLS, FBS and IT. The ten questions listed in the table need to be analyzed and discussed in details to examine the validity and reliability of the TMA and to provide a clear picture about the meaningfulness of this online formative assessment for the student learning experience and the importance of preparedness, feed-forward and feedback. Below is the data analysis:

Q1. AOU students are well prepared to tackle TMAs:

Over two third of the tutors in the three disciplines disagree about the AOU students preparedness to tackle TMAs. This is mostly true at the lower levels when students are neither linguistically nor conceptually equipped to deal with research. The lack of knowledge about research methodology results in the student, either performing poorly or resorting to plagiarism. Students were asked to write their assignment in 1500 words and in third level courses as long as 2500 words. The tutors' responses that their students were not prepared to tackle TMAs go with the fact that many of their students' senior high school studies had prepared them neither conceptually nor linguistically for university-level writing. OU-based core courses are quite demanding and so is assessment.

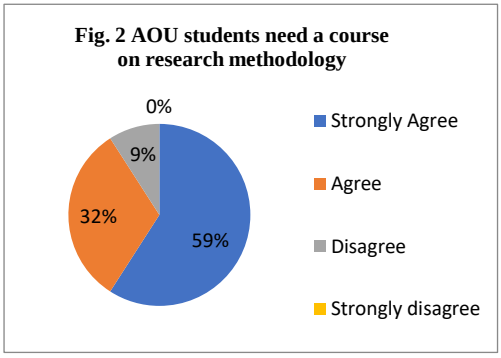


Q2. AOU students need a course on research methodology before they are assigned TMAs:

The vast majority of the tutors (90%) agree about the crucial need of a tailored mandatory course on research methodology across disciplines, for instance the MLA style sheet for the ELL program and the Harvard style sheet for the Business Studies. After passing the English language foundation program, students would have acquired the language skills that enable them to comprehend research methods. One of the intended learning outcomes of the course is to instill a certain awareness

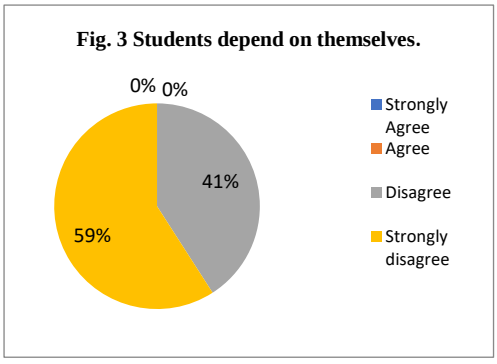
of the glory of originality, creativity, and excellence as opposed to the degrading negative practice of plagiarism.

The above findings show that tutors agree that students must learn how to initiate a research idea, summaries, literature review, formulation of a research problems or questions, proper methodology, analyzing data, satisfying interpretation of results, reference, citation, etc. Unfortunately, efforts on students' acquisition of research methods are not focused into a robust course, but marginally scattered within the contents of a few courses. Most of the AOU students, especially freshmen and sophomore, struggle with how to write their TMA assignment because of the absence of research methodology skills. This is one of the reasons students approach a third party to have their assignments written for them. Most students complain of how to approach qualitative research in particular. This type of research needs qualitative data such as surveys, observation data, and interviews to explain and analyze social issues for instance.



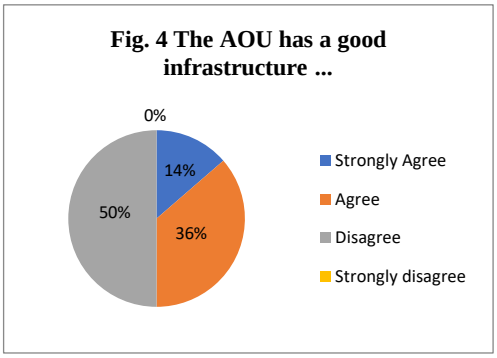
Q3. Students depend on themselves to answer their TMAs:

The consensus among all AOU tutors is that students lack self-reliance. Lacking the skills of synthesizing, they either resort to copy/past from online resources as recorded by the cases of plagiarism Turnitin software detected, or to local offices which sell assignments. In some cases, the flagrant difference between the students' in-class assignment (MTA) and their TMAs is another hallmark of plagiarism Turnitin fails to detect. Upon retribution, students admitted that they do not know how to approach a TMA! Dependence upon others defeats the objective of the assignment. Inductions and workshops upon how to answer TMAs did not suffice. One tutor stated "Tutors at the FLS called the month where TMAs are due, the cruel month! In spite of the efficacy of Turnitin this semester, students' self-reliance has not been achieved and TMAs do not meet their intended learning outcomes." Another instructor commented "TMAs are a failure when it comes to assessing students' real progress". These comments shed some lights on the self-efficacy of AOU's students. From the co-authors experience, the way the questions were designed in some TMAs do not reflect the formative assessment, rather, these questioned were designed similar to the structure of summative assessments (final exams).



Q4. The AOU has a good infrastructure conducive to research:

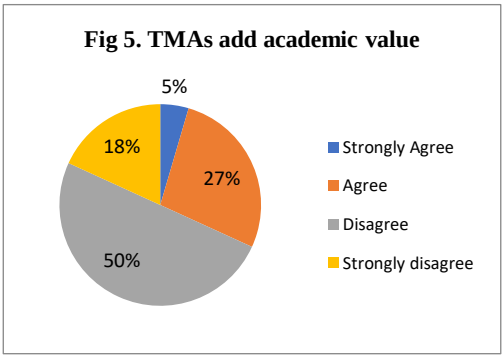
Research infrastructure is a catalyst of scholarly research in academic institutions. All theories of writing stress the importance of receptive skills prior to productive skills. For receptive skills to develop well, a respectable infrastructure is a crucial means to an end. The AOU officials realized the drawback and took ardent steps to overcome it. Hence, 50% of our tutors agree that the e-library and physical library are conducive to research. The other half are ambitious for more improvement of the existing infrastructure, through subscription in more specialized e-journals for emerging research opportunities.



Q5. TMAs add academic value to our students' learning experience:

Ongoing formative assessment and constructive feedback are all considered part of the teaching process allowing students to apply what they learn. However, our results show that two third of the tutors believe that TMAs add no academic value to our students. Qualitative data suggested the main drawbacks that act as a stumbling block towards an efficient model of online assignment. To support students' learning and to develop tuition skills, both GCCs and tutors ought to stress on feed-forward rather than feedback. Synchronic forums between GCCs and tutors should take place before uploading the TMA questions onto the LMS.

After being well-trained in a separate module or research methodology, tutors would eventually relay the feed forward, amply discussed with the course chair, to the students. With a proper feed forward in terms of scholarly research methods and critical thinking, TMAs may meet their LO's and add academic value to the students' learning experience. Yet, the co-authors still urge the replacement of online TMAs with in-class assessment.

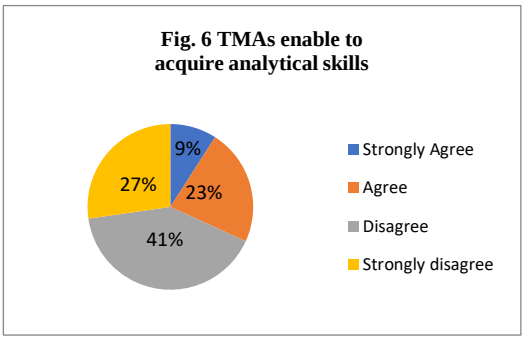


Q6. TMAs enable the students to acquire analytical/critical skills:

Over two third of our tutors believe that students do not acquire analytical critical skills while preparing their TMAs. It is therefore recommended that course chairs be continuously

updated upon the most recent methods of compiling exam questions which do not encourage the students to regurgitate but to engage into a critical analytical debate supported by in-text-citation from primary sources and critical review of the literature from secondary sources. Reverting the physical office hours into online office hours whereby students synchronically engage into discussion forums with their tutors and their peers about a topic that is inducive to thinking critically is another remedial suggestion.

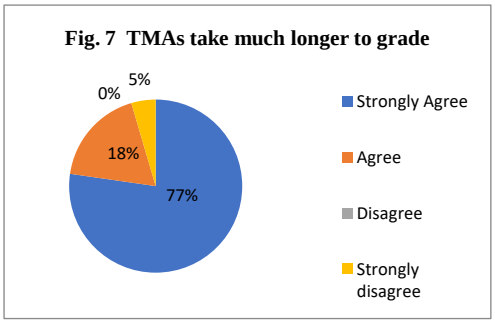
Some of the first level courses introduce the students to critical thinking. AOU students come from different educational backgrounds of private and government schools. A major cohort of these students has not acquired the language skills to digest demanding content that requires critical thinking. First level major courses are the first courses student register in. These courses teach the students concepts, fundamentals, theories, etc. and are not expected to provide critical thinking skills. Since the aim of using TMAs is to analyze critically, then, it is not surprising that our students are not ready yet to write TMAs in first level courses.



Q7. TMAs take much longer to grade than in-class assignments:

Unlike other open universities where grades are solely allocated to online assessment. Tutors at AOU grade both on campus environment (mid-term and final exams) and online environment (TMA). This is considered as time consuming when a substantial amount of teaching is invested by tutors evaluating student work. As the fig. 7 illustrates, over 95% of tutors complain of the long duration of grading TMAs as opposed to MTAs. It is even more psychologically traumatizing when tutors realize that these TMAs lack authenticity. This high response percentage resulted not only from the time spent in providing feedback but also from using the learning management system which comprises uploading and downloading of documents, writing feedback, grading and returning to the student... This result goes parallel with de Vort and Pogue's (2010) [6] findings:

Our findings conclude that… evaluating students and their work is greater in the online courses… The data suggest that online instructors are spending three times more time than face-to-face instructors evaluating student work.

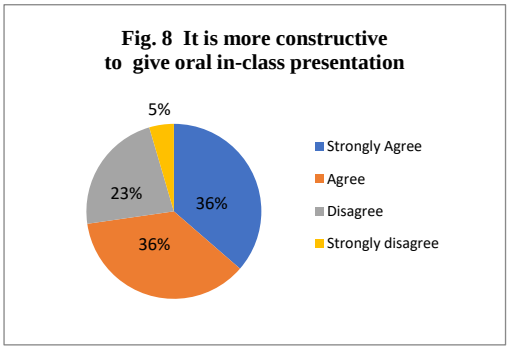


Feedback models of online assessment (Fleckhammer and Wise, 2010) [7] stress on generic rather than individual comments preceded by intensive feed forward. These are crucial phases that minimize the turnaround time of grading. However, being affiliated with the OU-UK, external examiners demand intensive feedback on formative assessment within the pages and on the cover page of the exam booklet. Moreover, at the level of the branch exam committee and the central exam committee feedback should justify the numerical grade given to the student. Students who file an appeal ought to see a concordance between the constructive comments given by the tutors and the marks. The long turnaround times on assignment between pre-marking, cross branch marking and the actual grading do plague our tutors and our students alike. Quality assurance unit records on the students' satisfaction survey show the students' lack of satisfaction with a long duration of returning TMAs (two weeks or more). At times, students do not even get to see the feedback particularly when submission deadlines are extended to merge with the beginning of the summative assessment. The objective of the formative assessment is thereby defeated. Students would not be able to benefit from the tutors' constructive comments as they would be absorbed in their summative assessment that is around the corner.

The high percentage of responses (95%) shows that almost all the tutors are suffering from the time invested in grading TMAs. AOU needs to adopt and implement on-campus online exams, at least for IT program where students can complete their assignments rather than using the traditional paper-based assessment. (Malevich, k, 2010) [8] stated that many universities adopted different online homework programs such as WebAssign, WebWork and MyMathLab. These programs are used seeking a decrease in the cost spent on hiring homework graders, to save time invested in grading the students' assignments, to send an immediate feedback to the students and to eliminate plagiarism among students. Similar to Malevich approach, the AOU adopted McGraw Hill online exams which the co-authors recommend administering them on campus.

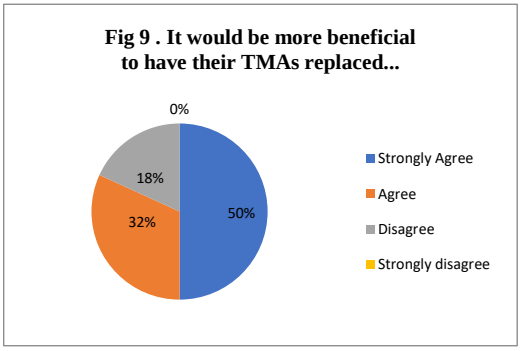
Q8. It is more constructive to have students give oral in-class presentation of their TMAs:

Nearly 60% of tutors agree and strongly agree that students must give an oral presentation of their TMAs. Oral presentations are brief discussions aimed to impart knowledge or to stimulate discussion. Our experience shows that one of the combative measures of plagiarism is to have the students give a brief oral in class presentation of the TMAs. This practice used to be conducted when the number of students at the AOU is not so high. However, with a current large cohort of students at Kuwait branch (above 8000 students) and the demanding material that is synthesized in a two–hour tutorial, tutors can no longer afford to let go with a tutorial time in favor of students' oral presentations. Most of the tutors who are in favor of this practice summon students during their office hours and ask them for a brief oral presentation. This is mostly done when flagrant discrepancy between in class assessment (MTA) and online assessment (TMA) is detected.



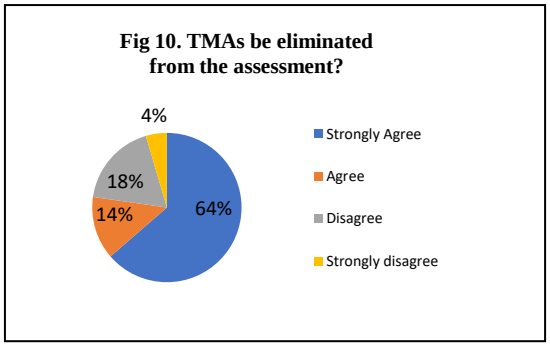
Q9. It would be more beneficial for students to have their TMAs replaced by in-class assignments like the FLS:

At the level of the English language and literature program, a university resolution had recently been taken to convert the online TMAs into in-class assignments. A comparative study had been conducted earlier at the ELU found that the students' grades have improved with in-class assignment as contrasted to the online assignment (TMA). This supports the present survey result that over ¾ of the tutors believe it is more beneficial to follow suit the FLS programs and convert the TMA to paper-based in-class assignment. The remaining tutors who opted for maintaining on-line TMAs are those who are teaching advanced third level courses where students are academically well equipped to approach research confidently. Yet, in light of the recent technological advancements and the co-authors advocate a total transition from online TMAs to in-class assessments.



Q10. From your experience, TMAs be eliminated from the assessment?

From the respondents' relatively long experience, over two third of them agree that TMAs do not contribute well to the students' learning experience and therefore are better disregarded, whereas about 20% of the tutors acknowledge the academic value of engaging students into scholarly research. A closer look into the respondents' identities averred that 3rd level courses tutors are the ones who stress the importance of TMAs and favor keeping this form of assessment with proper intensive feed-forward (guided TMAs). The Authors believe that this high percentage of tutors' preference to eliminate the TMA from the assessment is due to the time invested in grading the TMA without any value added to the students' learning objectives. Gikandi et al (2011) [9] stressed the hurdles that face proper integration of online formative assessment particularly when it comes to understanding major concepts of validity and reliability in online assignments. Within the same context, Akyol, et al. (2009) [10] share the same viewpoint: "*It is not an easy process to develop effective learning communities that will facilitate meaningful interactions particularly in online and blended settings because this requires well-structured strategies that are not always obvious among online educators".*



Despite all these controversies among academicians and researchers regarding online formative assessment, the co-authors still believe in the validity and reliability of TMAs in the 3rd level courses when students are well-resourced both theoretically and linguistically to approach TMAs more assertively. Yet, the challenges associated with AI-driven applications pose the threat of academic integrity.

Conclusion

The above analysis shows that TMA tool needs to be revisited to add value to the students' learning experience. It became clear that changes are more crucial with the recent expansion of AI. It is necessary to make better use of the invested time of the tutors and their role in the formative assessment, the way the TMAs are administered, and the nature of the tutor-student relationship. Below are the co-authors recommendations:

1. If the TMAs still need to exist, then GCCs need to be oriented upon a proper design of TMAs which enhance critical analytical skills rather than mere regurgitation that enhance rote learning. Encouraging students to focus on real-world projects in their TMAs would be more practical. Business students could apply hands-on approach and analyse data from actual companies, while IT students might develop automated solutions, like using Python to create software applications for their institutions. This approach will not only improve their practical skills but also connect academic learning with real-world applications.
2. The IT program needs to adopt online homework systems for tutors to use in their classrooms. The objective type of IT program's assessment necessitates the use of special software programs such as WebAssign, Webwork, MyMathLab, ARIS or EON-XR. These programs can also be used by students in business studies courses such as Business Communication skills, Math for Business, etc... These programs will enable students to complete their homework online, allow tutors to automatically grade and build their own assignments and track students' progress.
3. The feedback should consist of concise, individual comments emphasizing feed-forward, complemented by an in-class presentation. This presentation would focus on general constructive feedback addressing the most common and recurrent shortcomings and showing them how to improve future assignments. Additionally, integrating a course on research methodology into the university curriculum could effectively replace one of the existing university requirements, enriching the academic experience with practical research skills.
4. TMAs may be administered in the third level courses when students have gained academic maturity, completed research methodology course, learned critical analytical skills, acquired knowledge of the basic theories and concepts, and gained proficiency in the English language.

Acknowledgments

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Conflict of Interest Statement:

The authors declare that there are no conflicts of interest regarding the publication of this paper. None of the authors have any financial, personal, or professional interests that could be construed to have influenced the work.

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