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Take-home and online timed assessments at an ODL institution

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Abstract

The University of South Africa (Unisa), Africa's largest open distance learning institution, was forced to explore different possibilities to move away from the traditional venue-based examinations due to the astronomical cost and limitation of venues all over the world to assess students. Alternative technology-enhanced assessment types were identified and it included take-home and online timed assessments. As the Unisa systems did not provide for alternative assessments, it had to be reconfigured by way of action research to accommodate different forms of technology-enhanced assessments. Various parties had to be consulted and the needs of the academics and stakeholders from support departments had to be addressed. Feedback was provided by the module lecturers and students who participated in the pilot. The positive feedback and high participation rate of students expressed their readiness for online alternative assessments. This project provides a huge opportunity for future research on alternative assessments and the way we incorporate technology-enhanced methods to a much greater intent in the way we teach.

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1. Introduction

The University of South Africa (Unisa) is Africa's largest open distance learning (ODL) institution. Every year more than 350 000 students from over 130 countries register at Unisa (Unisa 2016). A total of 839 formal

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qualifications were offered by Unisa in 2013 while 355 240 students were registered. According to the student profile 90,4% of these students were part-time students and only 9,6% were full-time students. Of all the registered Unisa students, 8,5% were not South African residents (Unisa 2014).

Unisa has an online platform (learning management system [LMS]) called myUnisa that makes online access possible to registered students. Study material is provided via myUnisa and via couriers and/or the postal service. In order to communicate with registered students, discussion forums and announcements on myUnisa as well as sms's are used. As the number of venues is limited and the cost of renting venues all over the world to assess students is astronomical, Unisa management took the decision to explore alternative assessments and to move away from traditional venue-based assessments.

All approval processes were followed and task teams were formed with academics and representatives from various support departments. These support departments included business analysts and personnel from the Information Communication and Technology (ICT) section, representatives from the Directorate: Student Assessment and Administration and other stakeholders. Take-home assessments, timed assessments and multiple-choice questions (MCQs) generated by random selection were grouped together and formed one of the task teams. Two other task teams investigated other forms of alternative assessments. Portfolios, e-portfolios and research portfolios were grouped together in another task team. The third task team consisted of the remainder of alternative assessments namely webinars, peer review and continuous assessment.

The aim was to develop a process to perform alternative non-venue-based assessments and action research was used. The focus of this paper will be on the action research performed on the take-home and online timed assessments (including MCQs). Conclusions were drawn from the findings and the research conclusion as based on the literature review and the recommendations are summarized.

2. Literature review

Related aspects relevant to alternative assessments in an ODL environment are discussed in the literature review. Students in an ODL environment do not have the benefit of a full-time lecturer and have to study through self-instruction. At Unisa study material is provided online on myUnisa by way of official study material or learning units, additional resources, discussion forums, announcements, and so forth, in addition to printed material delivered via the postal service and/or couriers. Therefore students are encouraged to think and build knowledge at their own pace (Goolamally et al. 2010).

According to a guideline compiled by the London School of Economics and Political Science (LSE) Teaching and Learning Centre (2013), take-home assessments can be very useful in testing certain skills in for example law and management qualifications. It may even allow for more 'authentic' assessments due to assessments over a longer time period (e.g. 48 or 72 hours) in order to try to replicate the environment in which the students' knowledge and skills would be used. In a study by Norcini et al. (1996) it was found that candidates who completed a take-home assessment for recertification purposes preferred this type of alternative assessment and the scores they obtained compared similar to many closed-book (venue-based) assessments. Kim et al. (2008) found that the nature of every module (e.g. the history, purpose and student characteristics) determined the impact on the assessment method used. Therefore, not all types of alternative assessment are suitable for all modules, and careful consideration should be given to select the correct type of assessment. The research design and methods used are discussed in the next section.

3. Research design and method

At the stage the alternative assessment project originated, little was known about alternative assessments and it was decided to start with a pilot project. Action research was used as the pilot project occurred in an experimental environment. Mouton (2001) states that action research usually has exploratory, descriptive or action-related purposes. It was confirmed by McNiff (2002) that action research combines diagnosis, action and reflection. Denscombe (2003) and Ponte et al. (2004), identified a number of characteristics of action research. These characteristics included that action research must be:

- practical – thus developing solutions to practical problems which will in turn inform practice (Creswell 2005);
- focussed on change;
- an interactive cyclical process of planning, implementation and reflection;
- driven by participation; and
- an inherently interactive form of knowledge development.

Meetings were held with all stakeholders to try to establish the requirements of the academics involved in the project. The information collected included details on the module code and the specific college involved, contact details of the lecturer involved, the number of students registered, the type of module (year module or semester module), details of the formative assessments, what will be required for the summative assessments, the latest date for system changes required, the type of verification required, additional software used in the specific module and required for the summative assessment and the capabilities the required software should have that would have to feed into myUnisa.

It was decided to make use of myUnisa for the alternative assessment pilot project, as students were used to this online platform and they can access it simply with a username and password. Lecturers involved in this pilot project were requested to contact their students and inform them of the fact that the module was part of the pilot project. Students were also informed of a mock examination to test whether all systems worked and to assist them where they experienced problems. Five modules that were identified by Colleges for the pilot project in May/June 2015 represented four of the seven academic Colleges at Unisa. The modules were all undergraduate semester modules and included modules on first, second and third year level. The lecturers involved with these modules were trained on how to set up the assessments on myUnisa. Three of the modules involved made use of dynamically generated MCQs (SAmigo, one of the Sakai tools, was used). The other two modules made use of the Sakai e-Assessment tool to upload the assessment questions. Students were required to complete an honesty declaration to confirm that the assessment was their own work.

After the students completed the assessments, the myUnisa Gradebook (a tool used to record and store marks for assessments completed in the LMS) was used to capture the marks from the e-Assessment and SAmigo tools and also served as validation and archiving method at the same time. The ICT colleagues compiled a document to provide guidelines for marking online summative assessments with Gradebook, as the Gradebook tool is not linked directly to the Unisa systems. The final assessment marks were captured for sign-off and released to the students. The feedback from students and lecturers that were involved in the action research are discussed in the next section.

4. Discussion of results

The objective of the action research was to develop a process to perform non-venue-based technology-enhanced alternative assessments. After these assessments were completed in the pilot phase, interesting observations were made by students and lecturers, which are discussed below.

4.1 Feedback from students

Students experienced some anxiety about the change in assessment, and this resulted in more queries from students. The mock examinations alleviated a lot of these fears. From the feedback received from students via email, discussion forums on myUnisa and module evaluations after the assessments, it seems they were very positive about the experience and also preferred the venue-based assessment. Surprisingly, few complaints (only six) were received from students that they did not have access to a computer or the internet. The applicable Unisa regional centres were contacted by the lecturer to assist the students with a timeslot in a computer laboratory. In general, students strongly supported the online assessment.

4.2 Feedback from lecturers

The lecturers involved in the specific modules provided detailed reports on their experiences. All the modules involved in the pilot were online modules. This means that all study material and communication with students occurred through the myUnisa website. All the module lecturers made use of mock examinations that were made available to students on myUnisa before the actual assessment. This was to ensure that the students understood how it worked and to test the system. One of the challenges experienced included the identity verification of students. Even though an honesty declaration had to be completed by each student, the lecturers feel that technology should be put in place to curb any possibility of cheating. The university did establish a task team to work on the security issues as requested by the lecturers involved in the pilot.

A summary of the results from the modules that took part in the pilot during the May/June 2015 examination is presented in Table 1 below. It was interesting to note that this pilot included large student numbers even though only five modules participated in this examination period. The participation rate of students who completed these online assessments was very high and in the case of three of the modules exceeded 93%.

Table 1: Summary of results of modules who took part in the pilot during the May/June 2015 examination period

Module code	CAD161S	IOP1601	PYC2606	CEC3701	INV3703	Total
Type of assessment	e-Assessment	SAmigo	SAmigo	e-Assessment	SAmigo	
Registered students with examination admission	116	900	1 068	28	311	2 423
Completed assessments	82	865	839	26	288	2 100
• Current semester	68	783	789	-	258	1 898
• Supplementary	14	82	50	26	30	202
% attempted assessment	71%	96%	79%	93%	93%	87%

A total of 2 423 registered students with examination admission were requested to take part in the pilot and 2 100 students completed the assessments. Of these students, 1 898 were current registered students and 202 were supplementary students. The percentage of total students who participated in the pilot project amounted to 87% of total registered students of the modules who took part in the pilot during the May/June 2015 examination period.

A summary of the results from the modules that took part in the pilot during the October/November 2015 examination is presented in Table 2 below.

Table 2: Summary of results of modules who took part in the pilot during the October/November 2015 examination period

Module code	CAD161S	IOP1601	PYC2606	CEC3701	INV3703	HMPYC80	PYC4804	ANP411A	LML4810	Total
Type of assessment	e-Assessment	SAmigo	SAmigo	e-Assessment	SAmigo	SAmigo	SAmigo	e-Assessment	e-Assessment	
Registered students with examination admission	159	925	1 074	254	266	1 071	283	180	147	4 359
Completed assessments	122	908	919	249	224	878	247	148	142	3 837
• Current semester	118	784	893	249	198	878	247	132	142	3 641
• Supplementary	4	124	26	-	26	-	-	16	-	196
% attempted assessment	77%	98%	86%	98%	84%	82%	87%	82%	97%	88%

A total of 4 359 registered students with examination admission were requested to take part in the October/November 2015 pilot and 3 837 students completed the assessments. Of these students, 3 641 were current registered students and 196 were supplementary students. The percentage of total students who participated in the pilot project amounted to 88% of total registered students of the modules that took part in the October/November 2015 examination period. The participation rate of students who completed these online assessments was very high and in the case of three of the modules exceeded 97%.

A summary of the results from the modules that took part in the pilot during the January/February 2016 examination is presented in Table 3 below. This examination period consisted of postgraduate year modules.

Table 3: Summary of results of modules who took part in the pilot during the January/February 2016 examination period

Module code	MEDSN1A	LPL4802	NMN4801	HMPYC80	PYC4804	ECS4863	COP5901	Total
Type of assessment	e-Assessment	e-Assessment	e-Assessment	SAmigo	SAmigo	e-Assessment	e-Assessment	
Registered students with examination admission	14	509	87	180	41	138	8	977
Completed assessments	13	427	56	137	24	91	6	754
• Current semester	13	427	56	-	-	87	6	589
• Supplementary	-	-	-	137	24	4	-	165
% attempted assessment	93%	84%	64%	76%	59%	66%	75%	77%

A total of 977 registered students with examination admission were requested to take part in the January/February 2016 pilot and 754 students completed the assessments. Of these students, 589 were current registered students and 165 were supplementary students. The percentage of total students who participated in the pilot project amounted to 77% of the total registered students of the modules that took part in the January/February 2016 examination period. The modules assessed during this period consisted of year modules and a few supplementary examinations. The May/June 2015 and October/November 2015 examination periods consisted mostly of semester modules with more registered students. Over the three examination periods a total of 6 691 students participated in the pilot project. It amounted to 86% of registered students with examination admission who took part in the alternative assessment project.

5. Conclusion

This paper focused on the development of alternative technology-enhanced summative assessments specifically for online timed and take-home examinations. The high participation rate of students expresses the readiness of students for online alternative assessments. Only five modules were involved in the pilot project during the May/June 2015 examination period, but a total of 14 modules made use of alternative assessments in the October/November 2015 and the January/February 2016 examination periods and included semester modules as well as year modules. One of the challenges includes identity verification but it is being addressed by the university. This project provides a huge opportunity for further research on alternative assessments and the effect on the way we teach by incorporating technology-enhanced methods to a much greater extent. In future it may result in more and more modules making use of alternative assessments for formative as well as summative purposes.

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