A spring in your step: iSpring for e-assessment

Faculty of Arts and Social Sciences | Department of Music Technology

Module: Music Technology 112/142/171/181
Lecturer: Ms Leonore Bredekamp lbrede@sun.ac.za
Blended Learning Advisor: Dr Faiq Waghid faiq@sun.ac.za & **Blended Learning Coordinator:** Mrs Miné de Klerk mine@sun.ac.za

Context

Background overview

The Department of Music Technology offers an array of undergraduate courses, postgraduate diplomas and master's degree programmes. The Department offers a unique learning environment through which students can facilitate in the development of award-winning productions. This includes everything from international film scores to Grammy-awarded tracks for rock bands. Students are even afforded the opportunity to develop their own sound equipment.

The module has a strong practical component focusing primarily on the use of information and communication technologies (ICTs). The lecturer felt, however, that, in certain instances, the practical component was not congruent with the theoretical component of the module. Additionally, she felt that her traditional teaching and learning methodologies were constraining the development of students, as they were not being scaffolded effectively in their progression of the module. She therefore concluded that adopting a blended learning approach could address her recognised concerns.

Subject area

This is a combined module that consists of students studying for diplomas (Music Technology 171), a higher certificate (Music Technology 181) or degree programmes, such as BMus, BAMus or BSc (Music Technology 112 and 142). Students who articulate from Music Technology 171 and 181 to degree programmes receive the credits for the module but have to enrol for the module again when they register to complete their degrees. The content in the above-mentioned modules is exactly the same and students attend the same contact sessions. Only Music Technology 171 and 181 differ, since they are year modules. These students often struggle with academic writing and they therefore have a chance to improve their first semester work during the second semester.

Aspects covered in the module include basic knowledge of sound and acoustics, music instrumental digital interface protocols, notation software, the early history of electronic music, the history of sound recording and sound in film, aspects of sound in film, the manipulation of audio recordings using basic audio software, the different types of hardware and software in audio production and the skills required to set up a basic home studio.

Established practice

The module in question is a continuous assessment module. Previously, the lecturer presented one lecture and one tutorial per week. As student numbers increased, the lecturer had to repeat the tutorial, since the technology lab has space for only 16 students at one time. This continued until the lecturer had to repeat the tutorial seven times in one week. It was then decided that this was not practical. For assessment, students completed three to four big assignments (contributing mostly 25% to their mark).

The challenge

One of the challenges identified by the lecturer was that, due to the course traditionally having four written assessments, providing meaningful feedback was a challenge, especially since students used the feedback in their development as music technologists. Additionally, written assessments were not able to incorporate rich media, videos or audio. Given the nature of the subject, these assessments, lacking such media, were not as authentic as envisaged.

Advantages associated with the integration of technology

Through the meaningful integration of various technologies, the lecturer felt that she could create more authentic assessments that incorporated different forms of media, such as audio and video. Additionally, through the use of the learning management system SUNLearn, she could create automated assessments with the ability to provide students with timely feedback.

The lecturer also adapted her contact sessions. She now presents one lecture and one practical session per week. All students attend the practical session at the same time. During these practical sessions, they are shown basic demonstrations, YouTube videos and other resources that can assist in their learning. There are still two to three bigger assignments (contributing 25% each) and now also a few smaller assignments. The students furthermore receive a class attendance mark.

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Student overview

Approximately 75 students are enrolled for this undergraduate module. They all have access to computer usage areas to complete assessments. As mentioned, the module in question is a combined module and students are typically enrolled for the module as part of degree and certificate courses.

Other relevant role-players

Support in terms of blended learning was provided by the blended learning coordinator (BLC) and the blended learning advisor of the Faculty of Arts and Social Sciences. During the Blended Teaching and Learning Short Course of the Centre for Learning Technologies, the lecturer scheduled a follow-up consultation with the BLC to help her create and upload an iSpring SCORM package as one of the course assignments. The SCORM was then used in the module itself. Two follow-up consultations were set up to address technical issues (see the relevant details below) before and during the assessment period. Additional support was provided by the SUNLearn support person, Mr Morris Samuels.

Learning and assessment activities

Educational approach

After enrolling for the Blended Teaching and Learning Short Course, the lecturer decided to adopt a blended learning approach. This involved the meaningful integration of ICT to augment and enhance her existing teaching and learning practices. As blended learning capitalises on the strengths of face-to-face and online learning environments, the lecturer decided on using iSpring and SCORM packages to create a number of interactive quizzes.

Learning activities

Through the use of iSpring and SCORM packages embedded within the learning management system, the lecturer was able to create more authentic assessments by incorporating rich media experiences through the utilisation of videos and audio (Figure 1). Additionally, these activities are self-paced, allowing students to learn at their own pace.

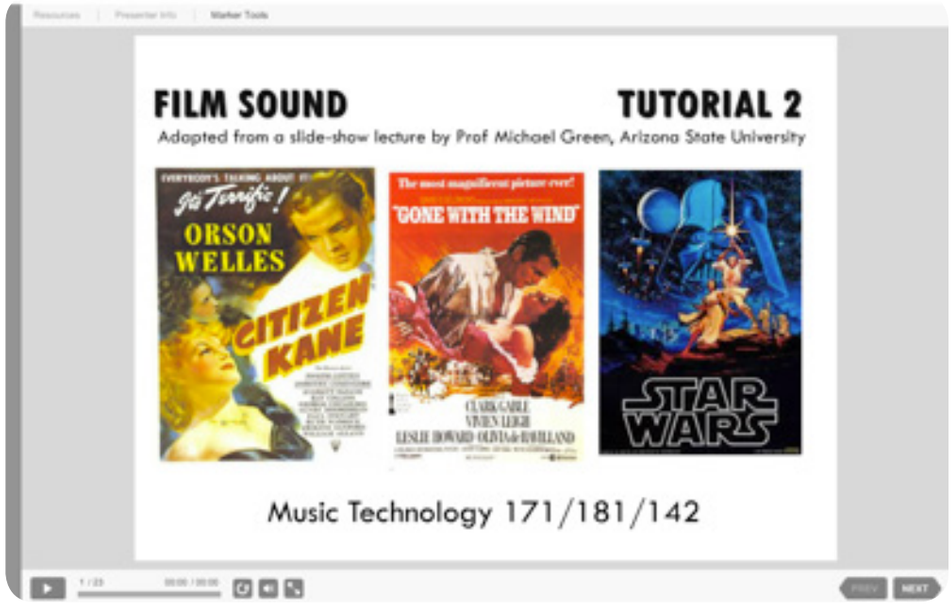

Figure 1: Screenshot of an iSpring activity making use of rich media experiences

The SCORM packages serve a dual purpose. Firstly, their content introduces students to basic key concepts with regard to film sounds, such as 'A brief history of film sound', 'Synchronised sound', 'Direct sound' and 'Dialogue overlap'. Students can navigate through all the slides as many times as required, going back to specific slides to reread the content and to view the rich imagery – in other words, they are given complete control in terms of self-paced knowledge acquisition.

Secondly, the SCORM packages serve as a summative assessment activity. Once students feel that they understand the content and have a grasp of the basic concepts, their knowledge is tested by the students completing the quiz at the end of the SCORM (Figure 2).

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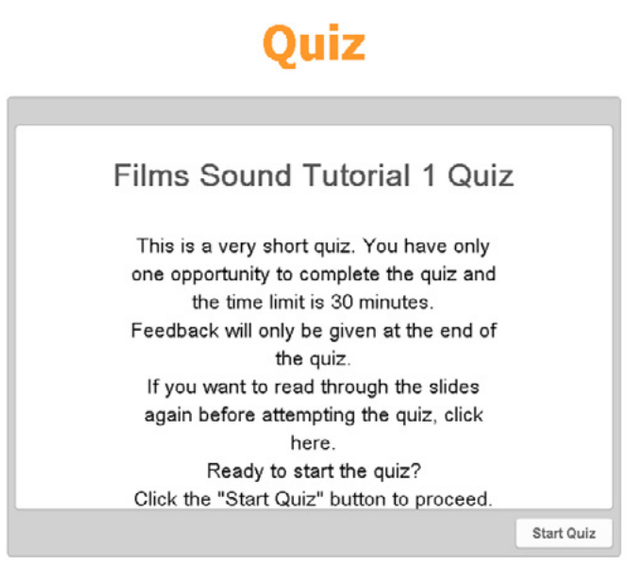

Figure 2: Quiz instructions within the iSpring learning activity

The quiz instructions remind students that they can revisit the lesson content before the assessment attempt but, once they start the quiz, they have only one opportunity (within a lenient 30-minute timeframe) to complete the quiz and they cannot navigate back to the content slides.

Feedback practice

When students complete the interactive quiz, they receive their results immediately. This therefore allows them to identify gaps in their learning and consequently adapt their understanding for future assessments.

Learning environment

Learning setting

As students complete the activities on the learning management system (LMS), they can complete the quizzes on any device with Internet connectivity. Some students choose to complete the activity in the Department's electronic classroom, which is recommended, as the Internet connection is reliable. Students who choose to complete the activity off campus are advised to ensure that their WiFi connection is stable. If they lose connection during their quiz attempt, they have to retake the quiz (i.e. their attempt is not saved on the LMS).

Technology resources

The lecturer was first exposed to iSpring during the Blended Teaching and Learning Short Course. She was attracted by the software since it was an opportunity to combine a lecture and a test opportunity in one. It allowed her to bring together basic information regarding the topic and to present it for self-study, while giving a small mark for assessment.

Support challenges

The lecturer found the process of re-uploading the SCORM package (which requires a number of steps) every time that an edit had to be made to the lesson quite cumbersome. Often, small issues were detected only once the lesson was uploaded to SUNLearn. For example, as a default iSpring setting, there was a 'Back' button at the end of the quiz as opposed to a 'Finish' button, which confused students. Once the lecturer and the BLC managed to replace this with a 'Finish' button, they found that clicking on it did not close the iSpring window in SUNLearn. As a result, students were not sure whether their attempt would be saved once they clicked 'Finish', as nothing happened.

These small glitches led to the iSpring having to be deleted from SUNLearn and the editable version changed in the iSpring quiz maker and re-uploaded to test the new version on SUNLearn. Not being able to edit the iSpring activity directly on SUNLearn was therefore quite time-consuming.

Another problem that students experienced due to unreliable Internet connections was faulty results. For example, the SCORM package registered submitted answers as individual attempts if the Internet connection dropped during the attempt, which implicated the final mark. Fortunately, however, all the data on the students' attempts were saved on SUNLearn. The lecturer could therefore access this data, view which answers were correct and then manually override the final quiz results. She used the SUNLearn forum to respond to students' queries and asked them to be patient with the technical issues that many of them experienced.

Student experience

Student feedback on the learning experience

The students report that they prefer the rich multimedia experience of the online assessments. The traditional assessments prior to the use of

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SUNLearn and iSpring simply encouraged the regurgitation of knowledge. They feel that they are able to develop their practical skills better through the use of the online assessments.

General

Opportunities and challenges

The lecturer would like to use iSpring and SCORM packages more to assess practical skills and create more authentic assessments. It was a big challenge, however, that the iSpring activity could not be edited on SUNLearn but had to be reloaded after any changes. In the future, the lecturer wants to include audio clips and short videos. She feels that one should allow oneself more time to design and test these learning activities.