# Improving marking of live performances involving multiple markers

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Assessment in the arts can be challenging. The problems associated with assessing student performances are that judgements are complex and even more so when they involve multiple markers (Campbell, 2005). It can be difficult to ensure assessment is fair, valid and reliable and that students are provided with clear feedback that is meaningful to them. This paper describes the development and trialling of an innovative, technology supported tool, designed to improve the confidence, efficiency and effectives of student performance-based assessment in arts education.

This project is a work in progress and early trials of the Internet based digital computer technology tool suggest that it reduces tutor anxiety, increases markers' confidence, improves the management of assessment and record keeping, facilitates easy and quick moderation, and provides explicit feedback to students to enhance ongoing learning. The perception by stakeholders is that this assessment is far more accessible and easy to use than previous methods.

The project was implemented in a Bachelor of Education course, with 170 third year pre-service teacher students. The performances were an end of semester assessment where groups of students were simultaneously assessed on short creative performances by each of their three tutors. Initial assessment was conducted online during the live performances and also online for one week afterwards, where tutors were able to review video clips of each performance and discuss marks via a confidential online tutor 'chat box'. The marked electronics rubrics with the video clips and tutor comments were emailed as pdf documents to students. The students' responses have been overwhelmingly positive. They have a preference for electronic assessment as this enables them to review and engage with their assessment multiple times. They felt that having the video clip of their performance side by side with the assessment clearly demonstrated learning.

Key words: online assessment, multiple markers, moderation, marking tool, marking live performances.

## Introduction

Our pre-service teachers are training to be generalist teachers of young children. Among other things, they need to have a good level of understanding of learning area content as well a range of skills. At the start of the arts education units, many pre-service teachers express concerns with their own understandings of the arts, which they feel at best are limited. So for many, teaching the arts to children seems somewhat daunting and a challenge. The aim of the arts units is therefore to enable pre-service teachers to construct an understanding of arts education pedagogy and to help them learn some arts skills. We provide a number of learning opportunities, one of which is to use assessment *for* learning. To do this, we developed an Internet based digital computer technology tool which was used to assess their arts understandings and skills. The tools consisted of the following:

- A marking key with specific criteria directly linked to the unit outcomes, on which the pre-service teachers were assessed by their tutors. Research shows that where the outcomes are clearly articulated, and an opportunity to reflect is given, the learning is improved (Brunvand, 2010).

- A space for the tutors to include a narrative type of comments, which allow a far richer depiction of learning. This enables the actual learning to be better communicated (Absolum, Munro-Keene & Phillips, 2009) and for a greater motivation towards learning (Denton, 2001).

- A digital video recording of the pre-service teachers' group performances. These recordings are the visual evidence of pre-service teachers learning as they demonstrate their knowledge and skills in tutorial settings (prior to working with any children). The video is embedded beside the tutor assessed marking key so when the video is viewed the pre-service teacher can at the same time see how they were assessed by the tutors. The assessed marking key with video is a pdf document which is emailed to the individuals who can then view it multiple times and use it for further self reflection.

- Additional feedback pre-service teachers receive is from their peers at first, directly following the performance and later, when they review each other's video recordings. Feedback that is multi-faceted; offering multiple views of learning such as viewing own video footage to "see" their own learning (Ladson-Billings,1998; Miels, 1999) as well as receiving verbal and written comments from peers and tutors enables the construction of meaningful learning (Brunvand, 2010).

Literature about the use of videos as a tool for assessment through reflection highlights the benefits to learning in terms of encouraging in depth analysis and higher order thinking, self efficacy and powerful insights that can be achieved (Brunvand, 2010, Ladson-Billings, 1998,Song & Catapano, 2008, Romano & Schwartz, 2005, Miels, 1999, Rich & Hannafin, 2009) because videos enable students to 'visualise' themselves thus enabling positive changes (Ladson-Billings, 1998). It provides learners the opportunity to construct learning (Brunvand, 2010), and the constructivist approach to learning is the theory that underpins our teacher education course at this university (ECU K-7 Course Principles, 2005). Use of online e-marking has been extensively researched by Campbell (2005) who found that the tool enables a paperless assessment that increased marking productivity, improved moderation practices as well as streamlined evaluating and analysis of overall results. The tool used in this study was modelled on earlier e-marking tools developed by Campbell (2005).

Marking and moderation practices among multiple tutors which are fair assessment for students are difficult to implement (Campbell, 205) because of the ephemeral nature of live performances. Accuracy in assessment of performances where multiple markers are involved with large numbers of students and relatively short time frames is an issue.

In using the Internet based digital computer technology as a tool for assessment this project saw the streamlining of a difficult assessment process and improving the 'on the day' assessment processes, moderation practices among tutors and resulting in assessment that is more valid. It took away the need to make instant decisions and enabled the tutors to mark away from classroom distractions (Brunvand, 2010). In addition, the use of technology enabled the quality of feedback given to students to be far more comprehensive and educative. McConnell, Lundeberg, Koeler, Urban-Lurain & Zhang (2008) show that when teachers review videos as a part of their assessment, they are more likely to base their judgements on evidence rather than memory. When an immediate response is not necessary, the teacher then has the luxury of being able to engage with a deeper reflection and analysis (Romano & Schwartz, 2005).

## Aims of the project

The aims of this project are to research and establish more efficient methods of assessment of performance- based learning particularly where multiple markers are involved with large numbers of students. Internet based digital technology is used as a tool to streamline methods of assessing, communicating between markers and catering for moderations processes which allow for reflective thinking and discussion between markers at times that are convenient to each.

In addition, the use of electronic marking tools with video clips of students' performances attached to them will provide explicit, educative and comprehensive feedback to the students on the quality of their

learning. Providing quality feedback to students about their learning is a significant factor in enhancing learning outcomes (Dinham, 2010). Feedback given to students in this project is based on authentic assessment, which relates to their future work as teachers.

**Research questions**

1. *Assessing live performances.* Can the assessment and moderation process of student performances be streamlined and made more efficient by collating each assessor's marks in the case when multiple assessors mark simultaneously while allowing them to instantly see each other's marks and comments?
2. *Moderation of assessment.* Can moderation processes be conducted via the web so that markers do not need to have face to face meetings, but rather review and modify their marking by communicating with each other via the web enabling access at times suitable to each marker?
3. *Feedback to students.* Can the video recordings be attached to each marking key so that students receive a pdf copy of their performance alongside the tutor's marks and comments so that the feedback given is explicit, comprehensive and assessment that aids learning?

## Description of the project

This project came about as a response to a continual drive to improve the assessment of students in the Bachelor of Education course where in third year the students undertake two units of study in arts education with a focus in visual art, music and drama education. The first semester's learning culminated in group performances where the students brought together their learning from these three areas of the arts. Each group had approximately 6 students and there were 28 groups. Performances were scheduled over one whole day in the last week. Each group had five minutes to perform, with an additional few minutes at the end to receive verbal feedback from their audiences, which comprised largely of their peers but also of others (e.g. children). Each performance was videotaped.

Each of the three tutors assessed the live performances on an electronic marking key, which was based on criteria in creativity skills, arts skills and group work/collaboration skills from one arts area only (i.e. music or drama or visual art). Using wireless access, each tutors had instant access to view the others' results and comments. Provision was made via a "chat box" for tutors to insert questions, thoughts or comments to each other, which were not available for students to see. It removed 'unproductive, busy work of marking, such as adding up of marks, recording and spell checking' (Campbell, 2005 p.529) therefore allowing more time to be given to comments and moderation. This resulted in a much more streamlined assessment process which also eliminated the need for verbal talk among tutors during the performance and recorded their thinking at the time so that tutors could return to it at a later date during the moderation process.

The moderation process was conducted electronically for one week after the live performance and at a time convenient to each tutor. With online access to all completed electronic marking keys, the performance videos for each group and the comments/conversations tutors recorded at the time of performance, tutors were able to use the chat box to ask each other further questions, clarify aspects and negotiate final marks each time they logged on. These comments, although not visible to students, were left on the electronic marking keys. They could be used at a later time to remind tutors of the moderation conversations that took place should any student require further feedback or clarification about how their marks were awarded.

Once reviewed and finalised, each group's video performance was inserted into the electronic marking key page alongside the marks and comments. The whole marking key, including the video clip of their performance was converted to a pdf file and then emailed to each group. This gave students the opportunity to view their own performance from the tutors' and audience perspective and to explicitly see how they were assessed against the criteria.

## Contributions to student learning outcomes

This Internet based assessment allows for more communication between assessors during both the live performance and later during moderation which enhances assessment reliability and fairness for all students.

The assessment contributes to student learning through the quality and educative value of assessment (assessment *as* and *for* learning) as it makes explicit the way in which marks are awarded and comments made. The assessor's marks and comments become educative annotations as the students view videos of their own performance and read the assessor's marks and comments. In addition, video clips of performances will be selected and used as exemplars to demonstrate particular concepts, skills and understandings.

The video recordings offer students a view of their performances from the audience perspective. Comparing their own performance from this perspective against the criteria and marks/comments given provides quality feedback to individuals within groups.

## Significance of the project for assessors

The use of Internet based marking during the live performances by multiple markers where each has instant access to each other's marking enables communication between markers without the need to verbalise during the performances enabling a stronger focus on the performance. This results in enhanced accuracy of assessment.

> Assessing the drama performances using the electronic rubric simplified the marking process. I was able to view the live performances in their entirety... It made the moderation process instantaneous, as the team were able to view each grade as it was submitted on the rubric (Drama Tutor).

In addition, moderation of marks after the live performances need not take place in face-to-face meetings, but rather over a period of time where tutors are able to access the online marking tool and video clips of each performance at a time suitable to them. The online marking tool has provision for assessors to chat via a confidential box on the marking tool, only available to the markers. The comments in this box function to enhance moderation and record discussion between tutors for future reference.

> While I was still able to respond to the immediate impact of the performance, I was also able to go back and view the videos, reflect on my assessments and, if necessary, adjust some of my judgements. At the performance I could view my assessment criteria, the students' names and have immediate interaction with the other tutors who were assessing different elements of the arts. I felt that I was able to make informed and valid decisions rather than the 'quick draw' reactions of previous assessment experiences. (Music Tutor)

The online marking tool eliminates the need for paper-based documentation of assessments and enables far more efficient management of records for both the users and recipients. It has potential to be used across a number of educational settings where students undertake any kind of performance (including presentations and practical assignments) where one or more markers assess their learning.

## Significance of the project for students

Performance by nature is ephemeral and for students the whole assessment can be over in a short time. Students' intentions for their performance may vary from how it is perceived by the audience. Using video and the electronic marking tool means that their performance is captured visually as well as in the marks and comments by their tutors and these are viewed side by side. This gives students an opportunity to reflect on their performance and use the feedback from their tutors to enhance their learning.

> In truth I was quite nervous before hand; the performance and the feedback were over so quickly that I had little time to reflect upon them. Allowing me the opportunity to view the performance and hear the peer feedback, coupled with yours, J's and R's professional feedback through the rubric, has presented me with a rare and much valued opportunity to review what I had learnt and what I still needed to learn (Student).

Miels (1999) emphasises the positive effects and the value that is added to learning when students are given of multiple opportunities to view their videos. In addition, viewing their own videos with the tutor feedback enables the students to see actual events and why they were awarded the marks they were as opposed to what they thought might have happened (Romano & Schwartz, 2005).

Previous studies of assessment in tertiary education have indicated that students are largely concerned with the fairness of assessment marks (Wren, Sparrow, Northcote, & Sharp, 2008). Students in this study report that they are satisfied with the electronic marking as a means to further moderation among markers.

Students report that they like their assessment in electronic version. They feel that "it is an incredible use of technology. This method of feedback is truly unique. The opportunity to see the group performance and the rubric was fantastic" (Student) Receiving their marks and video clip via email complements their preferred mode of learning. They are able to access this from anywhere and as many times as they need.

## Conclusions

This project is an innovative, small scale, work-in-progress. To date, results strongly indicate that using Internet based rubric marking tools has streamlined assessment practice and enhanced moderations practices among multiple markers; it saved time and provided convenience to both the markers and students. Its strongest feature was that the assessment resulted in far more explicit and clear feedback which provided opportunity for students to review and discuss their learning in an authentic context through self reflection.

The ease of accessing an electronic document and the preference students have for electronic documents, gave students incentive to review the feedback. Many students reported that they accessed and reviewed the feedback rubric multiple times, each time focusing on a different aspect that was assessed.

This method of marking allowed for multiple moderation sessions, which satisfied the markers and students that the results given were fair and valid. The markers felt that the strength of this method of assessment was that they could review their initial marks and comments at a later time that was convenient to them and use the tutor chat box for discussion between tutors.

> For a tutor to assess these [performances] during a one off short performance
> seems to be a task that is in danger of being a 'hit and miss' affair. In this trial,
> all that changed (Tutor)

## Future directions and recommendations

Given the limit of time and resources, technology and online resources may be a key to engage the modern student in assessment and self -reflection particularly where the assessment is performance based. O'Toole (2009) makes the point that young people spend a great deal of time expressing and discovering themselves in cyberspace. The growing challenge, therefore, for many academics, is to harness the power of online technology within the formalised structures of the institution (Wheeler and Wheeler, 2009).

The opportunities Internet based assessment tools offers both tutors and students to enhance learning are many, for example, through student reflection and co assessors, tutor feedback and the use of video clips of their own performances as a reflective tool to enhance learning. The availability of electronic feedback combined seamlessly with the actual performance makes access to it convenient for students both on or off campus and at those times that are most productive educationally for each individual. In addition, the electronic assessment provides opportunities for students to review their feedback and performance multiple times.

ICT is changing the traditional learning and assessment processes (Campbell, 2005). Wheeler and Wheeler (2009) believe that there is a growing challenge for many academics to discover how universities can harness the power of online tools within the formalised structures of the institution. This project demonstrates an example of this. The possibilities are that this type of online assessment tool can provide educative feedback to students, and could be adapted to empower learning through self- and peer-assessment. These new forms of digital assessment tools provide the opportunities to engage in innovative assessment strategies previously beyond the financial resources of most institutions. Through self- and peer-assessment we become lifelong learners and digital forms of assessment, like the one described is making it possible within the resources available to educational institutions.

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