1. Aeronautical and Automotive Engineering

Gary Page, Loughborough University

WebPA CASE STUDY

Background

Gary Page has had experience of using WebPA over a four year period in a fourth year module that ranges across both semesters of the academic year.

The module (Group Design Project) requires students to go through various stages of a project to design an aircraft. These stages include the design process, configuration, analysis and costings etc. In 2008 there were 23 students on this module and they were divided into two groups.

Assessment is based on a team mark from coursework submissions converted to an individual student score through use of the WebPA application. Three different criteria are used in this assessment process. In 2008 all but one of the students completed the assessment (there was no penalty for non-submission).

Existing practice and intended aims

Gary decided to use WebPA on this module in order to reward students that work hard within groups and to penalise those that were 'free-riders'. Prior to the adoption of WebPA a paper-based method of peer assessment had been used.

The challenge

Gary would have preferred to assess this module using peer assessment only. However, in the absence of this option a combination of peer and self assessment was used. Gary was interested to see what effect or differences there would be in the marks allocated if final grades were awarded for peer only assessment compared to self and peer assessment.

[Editor's note: *a peer only assessment feature has since been introduced to WebPA.*]

Benefits

To Gary's mind, the primary advantage of assessing this group work activity online through WebPA was that it saved time by reducing the amount of paperwork involved and there was no need for him to calculate an individual score for each student as the system did this automatically.

He says that the majority of students were happy to use an online system and speculated that, as each student knew that they were going to be assessed by their peers, they would have modified the way in which they worked accordingly.

Gary says that having an interim assessment part way through the module meant that students had the

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opportunity of gauging how their contribution was currently being viewed by fellow group members. This gave them the chance to improve their contribution/efforts accordingly, if necessary. However, Gary notes that specific changes in attitude and behaviour are very difficult to measure. The interim assessment did not contribute towards the final mark.

Key points for effective practice

Gary offers the following advice for other WebPA practitioners:

- carefully set the criteria in relation to the task that is being set
- establish the right scoring range
- explain the process to the students at the start of the module and in advance of the start of the task/ activity involved.

Additional information

Gary suggests that sharing information with other WebPA practitioners would be very helpful. In particular, he is keen to find out what kinds of generic questions are most effective (specifically questions that measure aspects of group dynamics). He has also expressed an interest in hearing from others who have used a scoring scale of 0-5 (as opposed to 1-5) in order to find out whether this had impacted on the overall grades achieved.

Gary also notes that students do not appear to read questions/criteria properly and that they can appear to have a pre-conceived mark in mind that they award, regardless of the specific questions/criteria set.

Conclusions and recommendations

Gary's goal in using WebPA to assess the group work activity on this particular module was to reward hard working students and penalise those who contributed less and he feels that this has been achieved effectively.

However, he did comment that he felt that the deviation between the highest and lowest marks was too great, and that he would seek to address this in future.

2. Biology, Chemistry and Forensic Science

Paul Chin, University of Hull

WebPA CASE STUDY

Background

Paul Chin has had experience of using WebPA on a number of occasions. In the case reported here, WebPA was used on various modules delivered to 170 undergraduate Biology students, 100 undergraduate Chemistry students, and 34 undergraduate and postgraduate Forensic Science students.

The modules each involved different group activities, all of which involved working on a group project with one group product. Within each module, each group comprised, on average, between four and five randomly selected students.

Assessment was equally divided between tutor assessment and peer assessment through WebPA. For the WebPA assessment five different assessment criteria were used.

Existing practice and intended aims

The purpose of using WebPA to support peer assessment was to promote a range of transferable and scientific skills. The transferable skills included communication skills, time management and team working skills (amongst others) which would be developed during the process of undertaking group work. Based on the nature of the actual group activities it was also possible to develop scientific skills such as problem solving, critical analysis and planning skills.

There were a number of additional reasons for using WebPA. By involving students in group work and peer assessment they engage with each other more actively which, in turn, leads to a better learning experience. WebPA provided great time savings for Paul, freeing up more time to support students in other ways.

Benefits

Paul noted a number of advantages arising from his use of WebPA. Most significantly, time was saved through the production of automated results, making the assessment process easier. This meant that the students could gain more benefit from the group work activities and helped to "*put the assessment into perspective for the module's intended learning outcomes*." Paul also found that the way WebPA works as an administrative tool did not limit or restrict the way that he engaged with his students in peer assessment.

Based on evidence arising from formal student feedback, there was no objection from them to using an online system, demonstrating that online peer assessment is just as effective an assessment practice as other approaches. In addition, Paul noted that there were also a number of social

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and educational benefits reported by students in line with what had been hoped for.

On an institutional level, Paul says that his use of WebPA at Hull has provided the platform for a university-wide service which other interested colleagues had started to use. Unexpectedly, since he posted background information about WebPA on the university's intranet, Paul has been independently contacted by several students enquiring about how peer assessment could be of benefit to them.

Key points for effective practice

Paul advises other WebPA practitioners to:

- promote group work and peer assessment as a way for students to develop a range of study and employability skills
- explain to students the rationale behind peer assessment and the use of WebPA
- provide 'training' on how to work as a group
- offer students the opportunity to practice with peer assessment, helping to familiarise them with the process.

Additional information

Paul suggests that sharing information with other WebPA practitioners would be very helpful. In particular, he is keen to see how others have used it and how they have accustomed students to the concept and practice of peer assessment.

Conclusions and recommendations

Paul's experience of online peer assessment has been very successful and continues to be so. He feels that he has achieved more than what he had originally set out to do.

He also notes that within his own institution, work is still ongoing to fully integrate WebPA into the institution's central records system so that student registrations etc can be fully automated.

3. Civil and Building Engineering

Stephen Emmitt, Loughborough University

WebPA CASE STUDY

Background

Stephen Emmitt was introduced to WebPA by a departmental colleague who suggested it as a means of peer assessing group work online. He had no previous experience of using an online peer assessment tool, although he had previously used a paper-based system at a different institution to peer assess group work.

Stephen used WebPA in a third year module during the second semester of the academic year. The module (Architectural Detailing) required students to submit two pieces of conceptual coursework and to make two presentations. In 2008 there were 13 students on this module and they were divided into three groups.

Assessment for this group coursework was based on both tutor assessment (80%) and peer assessment (of a single criterion) recorded by students through the WebPA application (20%). Nearly all students on the module completed the assessment (there was a 20% penalty for non-completion).

Existing practice and intended aims

Stephen knew that it was a departmental requirement that individual contributions to group coursework should be assessed and he was also interested to see whether the WebPA system would live up to his expectations.

His primary incentive, however, was to gain an insight into what happens between students during group work activity.

The challenge

One challenge that arose during the course of the module occurred when one of the students completed one piece of coursework but not the other. As a result group members found it very difficult to assess that student's individual contribution to the group and for Stephen to give a final mark. He noted that in future each coursework submission would be assessed separately.

Benefits

For Stephen, the primary advantage of assessing this group work activity online through the WebPA system was that it saved time and involved less marking.

He did not note any specific benefits to the students arising from the online nature of the peer assessment, but did comment that some students "*played the game*" to try and improve their scores.

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Additional benefits that Stephen noted included the ability to store/archive the results of the peer assessment and the fact that the system allowed lecturers to comply with mandatory policies of assessing individual contributions for group work.

Key points for effective practice

Stephen enthusiastically recommends that others use WebPA for self and peer assessment of group work, noting in particular that:

- it is quick and easy to set up
- it is quick for students to use
- it is easy for the academic tutor to check which students had responded at any given moment in time.

In the future, Stephen also intends (on this particular module) to set different assessments for each deliverable and then combine the marks (outside of WebPA) to generate a final mark. This would effectively mitigate problems arising when students complete one aspect of a module but fail to complete others.

Additional information

There was just one aspect of peer assessment with which Stephen was uncomfortable. He described how one student came to ask for his marks because he wanted to see who had allocated them, an awkward situation.

In future Stephen has decided not to show how the overall mark had been arrived at so as to prevent any further complaints.

Conclusions and recommendations

Stephen feels that his use of WebPA has helped him to gain an insight into the group dynamics involved in the module he was delivering.

He notes that future assessments would be 'tweaked' on the basis of his experience of using the tool and as more research is carried out into peer assessment. He also feels that it would be beneficial to integrate WebPA with Loughborough's VLE.

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