



WebPA®

online

peer assessment

Resource Pack

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Case Studies

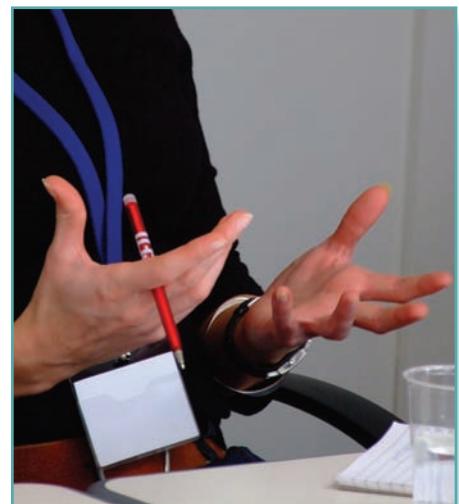
Briefing Papers

A Community of Users

WebPA Student Surveys



Introduction



Rationale for the Resource Pack

This WebPA Resource Pack has been designed to support those considering the adoption of WebPA. WebPA is an online automated tool that facilitates the peer moderated marking of group work. It captures the various deliverables generated from the JISC funded project (see the section on history on page 4) in a usable guide and also helps to inform the implementation and embedding of the tool within a department and, ultimately, across an institution. All the experience and guidance within the pack is based on lessons learnt by the adopters of the WebPA tool and the project team.

Who should read this pack

The pack is aimed at a range of people who may be involved in the consideration and adoption of an e-learning tool. You should read this pack if you want:

- an overview of what WebPA is and does
- to know where and how to get started with WebPA
- to understand your possible role in relation to WebPA
- access to other resources that promote the pedagogical benefits of self and peer assessment for the moderation of group work by students.

How to use this pack

Each of the sections is targeted at a different user group. Dip in and out of the sections as required or point colleagues to relevant sections and give them the handouts at the end of the pack.

Background

What is WebPA?

WebPA is an online automated tool that facilitates peer moderated marking of group work. Students carry out a group task set by the academic tutor and follow this by an assessment on the performance of the group. A 'weighting factor' is generated for each individual group member which is derived from each student's input against defined criteria. Based on the total mark given to the group task, assessed and allocated by the academic tutor in the usual way, the weighting factor is then used to moderate marks providing an individual mark for each student.

The tool is convenient and flexible, lending itself to any type of university group assignment in any discipline. Academic tutors can determine the size of the groups, the overall number of groups for the task, the assessment criteria, when and how the assessment is delivered and a whole host of other flexible parameters.

The WebPA tool was made available as an open source application in 2007 and is based on sound pedagogical research. Academic tutors at

Loughborough University have been researching the use of the tool in teaching over the past ten years. As the tool has been widely adopted, other academic tutors are now carrying out research in their own discipline areas, demonstrating both the appeal and the versatility of WebPA.

Why use WebPA?

Contemporary pedagogy has heavily promoted the benefits of student-centred team work. However, the allocation of fair and equitable marks still remains a major problem. Students express strong disquiet about receiving an overall group mark and wish to

"This fair method allowed us to identify each other's strengths and weaknesses, meaning that we worked better in subsequent group activities. The feedback I received has been invaluable to my personal development." Luke Field, Third year undergraduate student, Loughborough University

be assigned individual marks that reflect their personal effort and ability. This is where the WebPA tool can help ensure that students view the assessment process more positively.

History of WebPA

The WebPA tool has been developed over a number of phases and was originally adapted from a paper-based system into a complex Microsoft Excel spreadsheet in 1998. As the internet became more widely used the tool was rewritten to work as a simple web-based system.

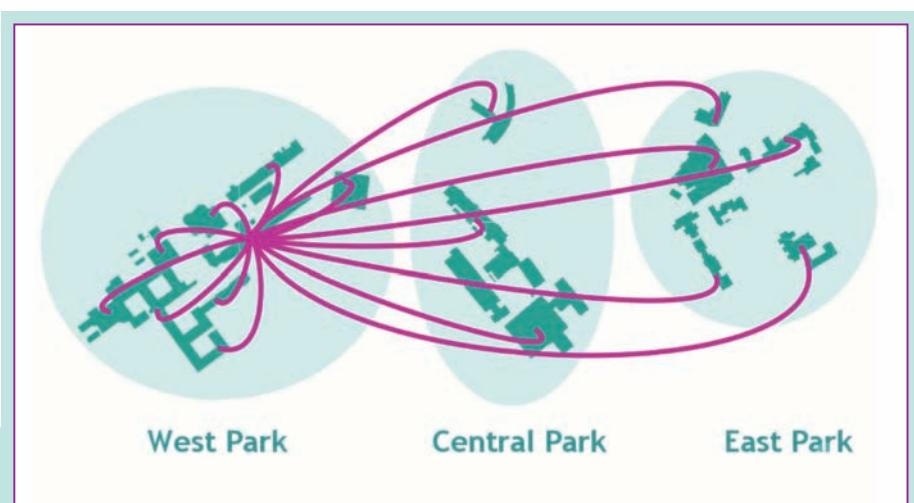


Figure 1. Spread of WebPA across the Loughborough Campus



Later it was found that the tool used a similar methodology to that outlined in Goldfinch and Raeside (1990), utilising the same basic principles.

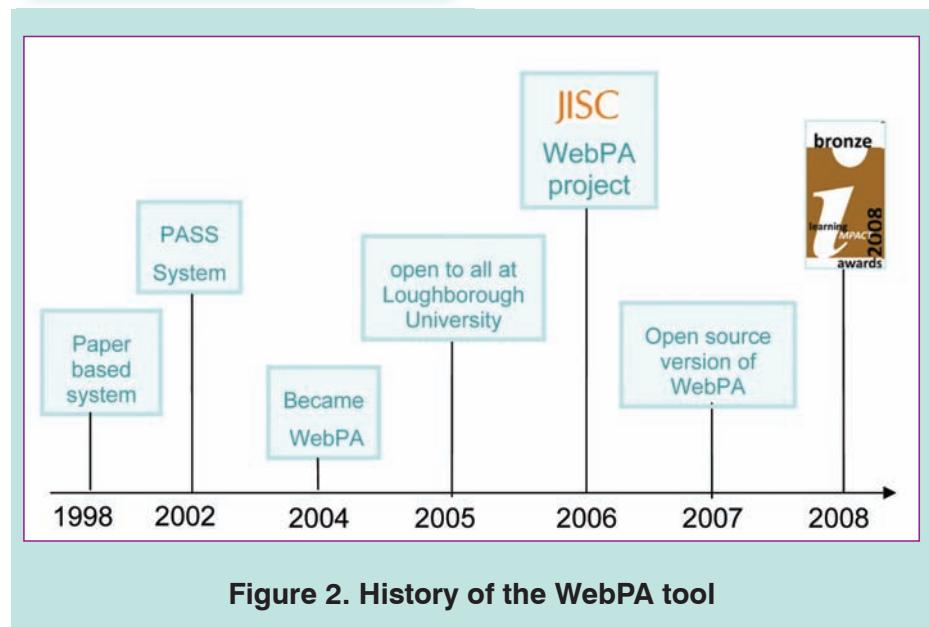
In 2006 the WebPA project was set up in partnership with the University of Hull and the Engineering and Physical Sciences Higher Education Academy Subject Centres. Funding was received from the JISC e-Learning Capital Programme. This allowed the consortium to make the tool available as an open source application in mid 2007, incorporating new features and processes and widening its use to other UK higher education institutions (HEIs). By 2009, the users of the WebPA tool had formed a community of approximately 17 HEIs, including colleagues in Australian universities. This community of users is continuing to grow and provide support to new adopters of the WebPA tool.

In 2008, WebPA was awarded a IMS Learning Impact Award, recognising the use of technology to improve learning. WebPA was the only UK project among the twenty-three shortlisted finalists.

In addition to receiving an award, the WebPA tool was named 'Best Assessment Support' for the 'best in category' awards.



"WebPA is simple to use and affords me a unique insight into the operation of my groups. It eliminated the bickering that my old 'paper' method used to promote - and the students like it" Professor Rob Parkin, Head of the Wolfson School of Mechanical and Manufacturing Engineering, Loughborough University



Section 1

Information for Academic Tutors

Introduction

WebPA supports academic tutors by alleviating the problems traditionally associated with the assessment of group work, often replacing an existing paper based method and saving time. WebPA is an award winning peer assessment tool that helps support group work activities for formative or summative assessment.

This section of the WebPA Resource Pack will help an academic tutor to make an informed decision on whether WebPA is the appropriate tool for their use and how to proceed.

Group work

This Resource Pack assumes that you already use, or have made the decision to use, group work in your teaching. However, if you wish to know more about the benefits of using group work, then a good introduction is ‘supplementary information about self and peer assessment’ available from <http://www.webpa.ac.uk/?q=node/107>.

In addition to published research on WebPA itself, a literature review of research on the use of peer assessment in teaching and the assessment of group work was carried out to inform the development of WebPA. This included an examination and comparison of other available tools for the peer assessment of group work <http://www.webpa.ac.uk/?q=node/288>.

"Students are much more satisfied – complaints have almost disappeared"
Dr Carol Robinson,
Maths Education Centre,
Loughborough University

"Overall marking is honest and credible"

*Dr Keith Pond, Business School,
Loughborough University*

Why WebPA is the right tool for the assessment of group work

WebPA specifically addresses and solves the most common issues facing academic tutors with regard to the assessment of group work:

- you need a tool to help with assessment which will save time and reduce errors
- you wish to reduce student complaints that the assessment is unfair
- you would like to give students individual marks for a group project but cannot assess what they have done in non-contact time
- you want to assess the process as well as the product of the group work.

How WebPA works

In essence, WebPA will allow you to create and manage an assessment for group work where students peer moderate the marks. WebPA is non-prescriptive and allows you to define the marking criteria and the

proportion of the overall group grade that can be moderated. The key tutor output is that student grades are generated in usable reports which will not only save time but also help to make group work fairer, along with the assurance that the tool is based on sound pedagogical research. If you wish to read more, then published research is listed in Section 4 (*Publications*). One of the key published papers to read is 'The development and evolution of an online peer-moderated-marking tool: WebPA' (Loddington, S., Pond, K., Wilkinson, N. and Willmot, P., 2009, *British Journal of Learning Technology*).

There is a demonstration version of WebPA where you can log in as both an academic tutor and a student to try out the system and explore the features:

<http://webpaos.lboro.ac.uk/>

What are the benefits of using WebPA?

The following is a summary of the benefits that have been identified through evaluation as having the most impact. A more detailed overview is given in the WebPA effective practice guide <http://www.webpa.ac.uk/?q=node/578>.

For students:

- it is a confidential and secure way of assessing individuals within group work activities
- they are involved in the assessment process, reflecting on their own and their peers' performance
- they receive timely and balanced feedback on their assessment through the peer assessment tool
- it positively impacts on individual performance and team dynamics, enriching the overall learning experience
- they find it to be a fairer way of assessing their work and complaints are largely reduced.

For more information on student attitudes to WebPA, see the enclosed report on 'WebPA Student surveys' and read 'Perceptions of peer assessment in university teamwork' Willmot, P., Pond, K., Loddington, S. P. and Palermo, O. A., 2008, *International Conference on Engineering Education*.



"The literature review is very useful - particularly the table of references"

Dr Anthea Connolly, Faculty Assessment and Feedback Project Officer, University of Leeds

For an academic tutor:

- it is sophisticated, yet quick and easy to set up. It can be used in formative or summative assessment saving time and reducing workload
- there is flexibility to create your own assessment criteria, scoring ranges and groups to suit the way you teach - in any subject discipline
- it helps them to develop a picture of what happens within groups and to assess hard-to-measure outcomes such as group working and leadership
- it provides students with alternative forms of feedback within their assessment
- the generation of individual student marks is automated using a pedagogically sound methodology
- WebPA has been successfully used and evaluated for more than 10 years, giving confidence and access to a community of users.

For departments and institutions:

- students respond positively to the use of WebPA and anecdotal evidence shows that students request its use where assessment practices are considered unfair
- WebPA has the potential to improve results relating to feedback on national student surveys
- the tool can be offered as a service, centralising the recording of group assessment scores
- WebPA can contribute to the institutional quality assurance policy
- the tool can impact on assessment policy.

How do others use WebPA?

A number of case studies are available, covering a wide range of disciplines and institutions http://www.webpa.ac.uk/?q=case_studies. The case studies provide the reasons and drivers behind

why the tutor adopted WebPA, the effects it has subsequently had on their teaching and the students' attitude, behaviour and engagement with the process. The following case studies are included with this pack:

- 1: Aeronautical and Automotive Engineering
- 2: Biology, Chemistry and Forensic Science
- 3: Civil and Building Engineering

Common concerns before starting to use WebPA

Reliability of WebPA

The team behind WebPA have invested time and energy into ensuring that the tool will not let you down. The reputation of WebPA in the academic community is important. Bug fixes are available from the download page.

As WebPA is an open source tool there is an active community which is ready and able to answer any questions relating to its installation and use. It is hoped that you in turn will be able to help new users.

Figure 1. Demonstration version of WebPA

Because WebPA is open source, this means that you have all the source code for the tool. You can therefore make direct modifications and enhancements to the tool or find a developer with the correct skills to help you.

Validity of assessments conducted through WebPA
 Concerns have been raised in the past about the validity of the end marks in comparison with those given if the academic tutor alone was marking the group work product. Evidence provided by Willmot and Crawford (2005) shows that this type of marking is fair and comparable to that of other practices.

As with other assessment practices, the acceptance of the process by the QAA is important. According to the QAA section of the 'Code of Practice on Assessment' (regarding self and peer assessment) the processes used in validity, reliability and explicitness have to be addressed in order to show that the practice is credible. Academics using WebPA at Loughborough University are confident that they are able to address all three points.

Getting students to value the method of assessment

As with many innovative practices it can be difficult to get the students to value the method of assessment. As the academic tutor, you will need to address the reasons for using this type of assessment with the students, as well as the benefits they will gain from the practice. Additionally, you will need to address any concerns that they have about the assessment practice.

Will groups collude in awarding marks?

It is normal to be concerned that a group will collude and award the same marks for all of the members. The answer to your concern lies in how you perceive this behaviour. If you believe that there is no problem in the group and that good group work has been demonstrated then there is no collusion. Conversely, if you feel that other influences have been in play then you will need to address the group and investigate further - WebPA cannot determine this itself and so the academic tutor must look for anomalies in results or student feedback and address issues as they arise.

"The visiting panel commented that the peer assessment [conducted by using WebPA] in part B [2nd year undergraduate] was commendable."

Extract from Accreditation Report of the IMechE, May 2006, for Loughborough University

This area of group work has interested some of the academic tutors using the tool and the research has been reported by Robinson (2006).

What about unfair marking?

Over the years of use there have been a few cases where unwarranted marking down of an individual has been seen within a group. Another similar issue is when a student marks himself incredibly well compared to other members of the team. In both cases, it is normally seen that the rest of the group has been more realistic and the final mark is adjusted appropriately (moderated) as a result. The way WebPA calculates the marks greatly reduces this risk and you as the academic tutor can always overrule or further investigate any occasional cases where you think marking down has occurred.

Although occasional accusations of bullying via WebPA have been made, none have been found to be true when examined. An example of such an accusation came from 'Student A' who had overheard a conversation where a team mate said that he was going to use WebPA to mark 'Student A' down and was encouraging others to do the same. When the



tutor examined the input by all the team members this bullying had not occurred and 'Student A' actually did quite well. Although the discussion had occurred between the team mates, the confidential input of the scores for the assessment made it easier for individuals in the team to enter their own opinions. The anonymity experienced by the students is key and has been examined in Pond, Coates, and Palermo (2007).

'Gaming' of WebPA

There is always the risk of students trying to 'game' or play WebPA. There will always be students who wish to use WebPA to their advantage and work out how to gain higher marks. Two main factors contribute to student behaviour: team familiarity and year of study (final year students are more concerned with marks than first year undergraduates). However, the risks of students 'gaming' WebPA are no greater than when a manual system is used for peer moderation.

WebPA can assist in the prevention of the tool being 'gamed' as the academic tutor has the power to moderate and change the marks that are

influenced. As with collusion, it is the responsibility of the academic tutor to identify and address any irregularities in the students' input and final grades provided by WebPA.

Integrating WebPA with institutional systems

WebPA can initially work as a stand-alone tool. This enables you to get a pilot up and running quickly. However, in the long term it is likely that you will want to integrate WebPA with institutional systems.

In order to move towards integration with the Student Information System (SIS) at your institution you will probably need to involve learning and teaching support services and institutional IT services. WebPA does not support any particular SIS and it will be up to your institution to decide how the integration will occur. Integration has successfully been achieved with a number of different SISs and it may be helpful to post to the JISCmail list to see what has happened at other institutions.

Similarly, WebPA will not automatically integrate with Virtual Learning Environments

(VLEs). Again, this would require some local development. For example, Coventry University have developed a module that allows limited integration with Blackboard Vista (which is now available for everyone on the WebPA SourceForge area). Work is ongoing to provide integration with other VLEs.

How do I convince my department/institution to let me use WebPA?

The experiences of other adopters of WebPA show that you will need to engage a number of different groups at your institution (management, IT, learning and teaching support etc – both at departmental and institutional level), in order to get WebPA up and running. This may be fairly straightforward, particularly if you can demonstrate that you can already align the intended learning outcomes of the module which contains group work with WebPA. Make use of the briefing papers, sections written for other groups and case studies within this Resource Pack to help you engage others.

"The visiting panel commented that the peer assessment in part B was commendable"
Extracted from Accreditation Report of the IMech E, May 2006 for Loughborough University



Cost

There is no cost in obtaining the software or the support supplied by the community. However, there may be costs associated with using the time of technical or other support staff or purchase of a server if this is required.

How do I get WebPA installed?

WebPA can be downloaded free of charge from the SourceForge site <http://sourceforge.net/projects/webpa/>. Unless you are confident in progressing with the installation of the tool yourself, it is recommended that you approach a learning technologist to assist you. They will be able to help you identify where and how the tool can be installed. They may want to read the relevant briefing paper and/or Section 3 (*Information for IT support*).

Starting with a pilot

Testimonies of those who have adopted and embedded WebPA show that a pilot has been extremely beneficial. It allows potential users to demonstrate that WebPA addresses the assessment needs of the module

and is accepted by the students. In all cases, where the pilot has been successful, this has led to the wider adoption of WebPA.

For a successful pilot it is important that you allow a long enough lead-in time. Assuming that you want to be using WebPA in the first semester of an academic year, it may be that you and your support team install the WebPA tool onto local servers up to six months in advance. This allows for sufficient time for your support team to install WebPA and for you to familiarise yourself with the tool before you use it with students. Of course, this is just a guide - some adopters of the tool have managed to get an installation and pilot running within one semester.

Once the pilot has run it should be formally evaluated to see if goals were met and if there were any additional, unexpected benefits. If the pilot is successful, then changes to module specifications will probably be necessary to fully embed WebPA.

It is difficult to identify the maximum and minimum cohort of students for a pilot, as all modules and subject areas will differ. Currently WebPA runs with

cohorts ranging from as little as 20 students to a maximum of over 200.

WebPA doesn't need a 'high end' server to run and your department or institution should be able to provide a server for the co-hosting of WebPA. This means that any technical admin costs are often negligible as the WebPA support is integrated with any other services running on the server.

Table 1 provides an example of how a pilot may be undertaken.

Achieving wider use of WebPA within my institution

One of the hardest parts after a successful pilot is convincing more academic tutors to use WebPA and the institution to install and support it centrally. Depending on your original motivations for adopting WebPA in your teaching, you may wish to consider becoming a 'champion' within your institution. The role of 'champion' may entail nothing more than being prepared to share your experiences and extolling the benefits to others. At the University of Hull, Gordon and Chin et al presented at the University's annual Learning and



Teaching Conference, giving a paper entitled 'Encouraging team skills through enhancing engagement: the use of peer and self assessment in group work' (2009). Other academic tutors wishing to use WebPA have subsequently approached the team for support and access to the tool. Such an approach could attract internal grant and award funding. Alternatively, learning and teaching support staff within your institution may be happy to take on this role for you.

Getting support

Join the community of users to get further support – see the related briefing sheet. The Higher Education Academy Engineering and Physical Sciences Subject Centres will also provide a limited amount of support and advice. A special interest group (SIG) of users and developers provides another route for information and support. <http://webpa.ac.uk/?q=node/487>.

Table 1. Example of how a pilot may be undertaken

Task Name	Task Description
Identification	Identify all the people necessary to run a pilot – academics, technical and support staff.
	Meet and engage with those involved, ensure everyone is comfortable with what is involved from both an academic and technical perspective.
Preparation	Agree contacts for both technical queries and academic enquiries.
	Check that everyone is clear about what is to happen when and has any necessary instructions and is aware of bug tracking etc.
Implementation	Download and install WebPA.
	Provide user training for academics/support staff as necessary.
	Run pilot.
Evaluation	Meet with both the academic and technical contacts to discuss how the pilot went.
	Report on any issues that have arisen and agree a way forward.



Section 2

Information for Learning Technologists and Educational Developers

Introduction

This section of the WebPA Resource Pack is aimed at learning technologists or educational developers who are managing/supporting/involved in the installation and pilot of WebPA. It also provides some guidance on the support required for embedding WebPA into the department/institution.

Is WebPA the right tool?

WebPA is an award winning peer assessment tool that helps support group work activities for formative or summative assessment. WebPA supports academic tutors by alleviating the problems traditionally associated with the assessment of group work, often replacing an existing paper-based method and saving time.

WebPA is suitable for use by any academic who uses group work in their teaching as it helps academics undertake peer moderated marking of group work. It is usually used to reduce some common problems associated with group work and also helps academics to allocate individual marks for a single product resulting from group work.

It could be that your institution has decided to introduce more group work into the curriculum and in this case WebPA can often be a good tool to support academics in this process.



Relevant references

If you would like to find out more about the issues associated with group work see <http://webpa.ac.uk/?q=node/107>.

More detail on how WebPA can alleviate these issues is given in Section 1, also see the effective practice guide <http://webpa.ac.uk/?q=node/578>.

Try a demonstration version of WebPA to explore the features at <http://webpaos.lboro.ac.uk>.

How does WebPA fit within institutional policy?

The fit of WebPA with your institution's policy is dependent on that policy and its wording. You will need to identify the appropriate policy/policies for your institution. These may include:

- learning and teaching
- assessment
- group work
- e-learning.

It may also be prudent to consider departmental procedures and guidelines and drawing together all this information regarding policy to provide a basic FAQ (Frequently Asked Questions) which can be used with all the relevant stakeholders.

How does WebPA fit with the QAA?

As with other assessment practices, the acceptance of the QAA is important. Based on section 6 of the Code of Practice for the Assurance of Academic Quality and Standards in Higher Education (Assessment of students, see <http://www.qaa.ac.uk/academicinfrastructure/codeOfPractice/section6/>) “the use of peer assessed activities [...] enables students to understand assessment criteria and deepens their learning in several ways.”

What evidence is there that the tool is effective?

WebPA has been developed over a number of years and is based on sound pedagogical research that has been undertaken by those using and supporting the use of the tool. Due to the continued research, findings have been reported regularly and cover topics such as the validity of the peer marking process, the acceptability of the tool with both academic tutors and students and the evolution of the tool.

One of the key published papers to read is ‘The development and evolution of an online peer-moderated-marking tool: WebPA’ (Loddington, S., Pond, K. Wilkinson, N. and Willmot, P., 2009).

See Section 4 (Publications) for other published journal and conference papers that relate to the publication of the research findings.

"While the University does not wish to discourage tutors from using their own self and/or peer assessment approaches which are tailored to the needs of specific modules, it would also encourage departments to consider the use of WebPA."
University Policy Statement on Group Working – Minimum Requirements, Derek Bleasdale, October 2006, Loughborough University

How do I convince academics and senior managers to use WebPA?

Working with academic tutors

You may have to convince a colleague to adopt the tool as a trial. In this case you will need to champion the tool and possibly approach a number of academic tutors. It is easier to begin with tutors that you know are currently using a paper based system to allocate individual marks for group work.

You will need to begin a dialogue covering the benefits of the tool. In addition, you may have to challenge well-established beliefs, for example: who should assess the student work? Generally, once you explain the benefits to both the students and the academic tutors, the tutors can see the need for such a tool and are more willing to participate in a trial. It may be that you will need to agree that the marks will not be used to moderate the final group grade until the tutor is comfortable that the outputs are

reliable and realistic for individual students.

Within this pack you will find a briefing paper in the back cover wallet, specifically written to target the academic tutor which is useful when introducing the tool to them. Once you have the academic tutor on board for the pilot you may want to point them to Section 1 (*Information for academic tutors*). They may also find the enclosed case studies helpful.

Attracting more academic tutors in the future will be easier once you have completed a successful pilot and have a champion who is able to share his experiences and expound the benefits that he has found.

Working with senior managers

Gaining support from senior managers is always beneficial when introducing a new tool. How you gain this support will really depend on the senior managers and their associated roles and interests. In order to assist you in presenting your case you may want to show them the relevant briefing paper located in the back cover of this pack. In addition,

you may also need to keep them informed of the progress of any pilot that takes place and of any final outcomes.

Getting WebPA installed

WebPA can be downloaded from <http://sourceforge.net/projects/webpa/>

If you have the right IT skills and access to an appropriate server then you can install WebPA yourself. You will need to read section 3 for IT support and the documentation for installation <http://webpa.ac.uk/?q=node/30>.

Alternatively, you will need to work with your departmental/central IT support. For a pilot, it should be possible to work with IT support to find space to host the tool on a shared server. There is a briefing note [located in the back cover of this pack] to support you with this.

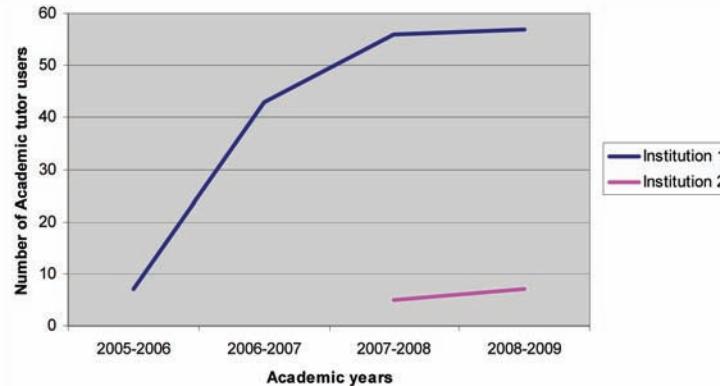


Figure 1. The progress of institutional adoption

Working with WebPA as an open source system

WebPA was initially released as an open source application in 2007. There is no charge for you to download, install and use the tool. The downloader is granted a licence to use the application and you can find out more about this type of open source licence (version 3 of the GNU General Public Licence, used in around 60% of open source projects) at <http://www.oss-watch.ac.uk/resources/licencefinder.xml>.

Other common concerns about using open source software such as security and scalability are covered in more detail on in Section 3.

Getting a pilot up and running

As a learning technologist or educational developer, it is hard to predict your role in the piloting of the WebPA tool. Some academic tutors wish to manage the whole pilot themselves, others might like you to organise everything and simply provide them with access.

The experience of adopters to date is that it is easier to begin with a departmental pilot – only one adopter has successfully begun with an institutional approach. In an ideal world, for a departmental pilot, installation can be achieved in just a few weeks – from the start to making the tool available to academics and students. Realistically, you should expect timescales to be much longer as other factors may also influence how long it will take to get a pilot up and running. These can include:

- resourcing – the availability of people to install the tool, support its use and the practicalities of having a server available
- timing – the current point in the academic year and the point at which the academic tutor would like to use the tool.

This is covered in more detail in Section 1.

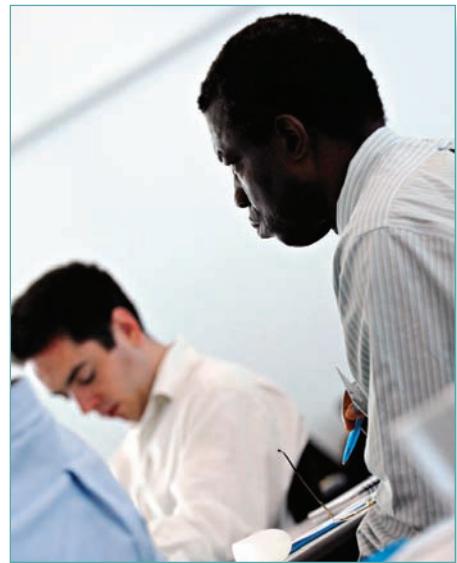
Cost

There is no cost to obtaining the software or the support supplied by the community. However, there may be costs associated with using the time of technical or other support staff in your university, or the purchase of a server if this is required. Cost implications are covered in more detail in Section 3.

Wider adoption

After the pilot has been evaluated and is seen to be a success, then you will need to decide on the next action to take. The role of learning technologists and education developers often involves working towards wider institutional adoption. Below are some of the things that you might need to get involved in:

- IT implications – installation on central servers, investing time and effort into providing integration with the university's other systems such as student and staff information etc.
- working to change module specifications if necessary



- encouraging your pilot academic tutors to present or write up their work, talk about their use of WebPA, apply for any local teaching awards and so on
- talking to other learning technologists and educational developers, including any central units, to help promote the tool and help identify other potential users
- making presentations or reports to any institutional e-learning committees etc.

Institutional adoption has been documented at two institutions. At the first (founding) institution the tool originated in one engineering department and spread, by a number of methods, into departments across the university. Use has increased from 7 academic tutors in 2005, to 57 academic tutors assessing over 7,500 students in 2009. At the second institution, WebPA has only been installed for 18 months and so the growth is smaller as yet, but it can also be seen to be increasing, see Figure 1.

Getting support

Join the community of users to get further support – see the related briefing sheet. The Higher Education Academy Engineering and Physical Sciences Subject Centres will also provide a limited amount of support and advice. A special interest group (SIG) of users and developers provides another route for information and support. <http://webpa.ac.uk/?q=node/487> .



Section 3

Information for IT Support

Introduction

This section supports someone involved in the installation of WebPA. It has been tailored to those with an intermediate level of IT knowledge. The section is confined to information relevant to the installation, if you want to know more about why your department or institution may have decided to use WebPA, or to find out about the purpose or history of WebPA, you may need to read other sections as well.

Your role in the adoption of WebPA in your institution

It is assumed that you have either been asked to install WebPA on behalf of an academic tutor or you are embarking on the installation process yourself. Most installations begin by piloting with a limited number of academic tutors and a set of small cohorts. Depending on the size of the team behind the installation, you may also be asked to administer WebPA which involves changing optional settings.

As you are likely to be the key contact for technical and maintenance issues we highly recommend that you join the JISCmail list <http://www.jiscmail.ac.uk/lists/webpa.html>, where any new releases, patches and other relevant information are posted. This will enable you to stay informed about the latest developments that may affect your installation of the WebPA tool and to install bug fixes quickly. More information about joining the community of developers and users can be found at the back of this pack.

FAQs related to the installation of WebPA

Downloading WebPA

WebPA can be downloaded from SourceForge and installed on any suitable server. Installation on a shared departmental server for a small pilot is a good starting point. For more information about the installation see the documentation at <http://www.webpa.ac.uk/?q=node/30>.

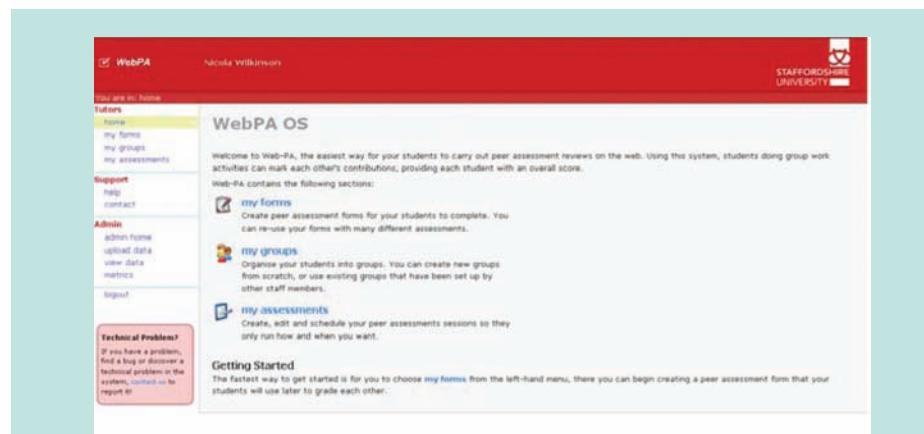


Figure 1. Institution specific corporate layout

WebPA is open source – what does that mean?

WebPA was initially released as an open source application in 2007. There is no charge for you to download, install and use the tool. However, there is a cost of ownership (see *Cost Implications*). There are also licence conditions to be adhered to (see Figure 2).

WebPA has been made available under version 3 of the GNU General Public Licence (GNU GPL) <http://www.gnu.org/copyleft/gpl.html>. The GNU GPL is used in around 60% of open source projects¹ and grants the downloader a licence to use the application. There are other elements to the licence that allow for distribution, modification and other such actions. You can find out more about this type of open source licence at <http://www.oss-watch.ac.uk/resources/licencefinder.xml>.

I'm concerned that WebPA isn't enterprise-ready

One of the most common concerns relating to open source software is that the system won't be enterprise-ready. Traditionally systems are considered enterprise-ready when they can be considered to be reliable; don't need specialists to install and support the tool; fit with the established security models; can be administered locally without the need for more specialists; and use a standard database.

WebPA has been proven to be enterprise-ready in the institutional roll out of the tool at both Loughborough University and the University of Hull. On average at Loughborough University, over 50 academic tutors currently assess 8,000 individual group members using WebPA annually. In comparison, the University of Hull currently assesses an average of 500 individual group members a year.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

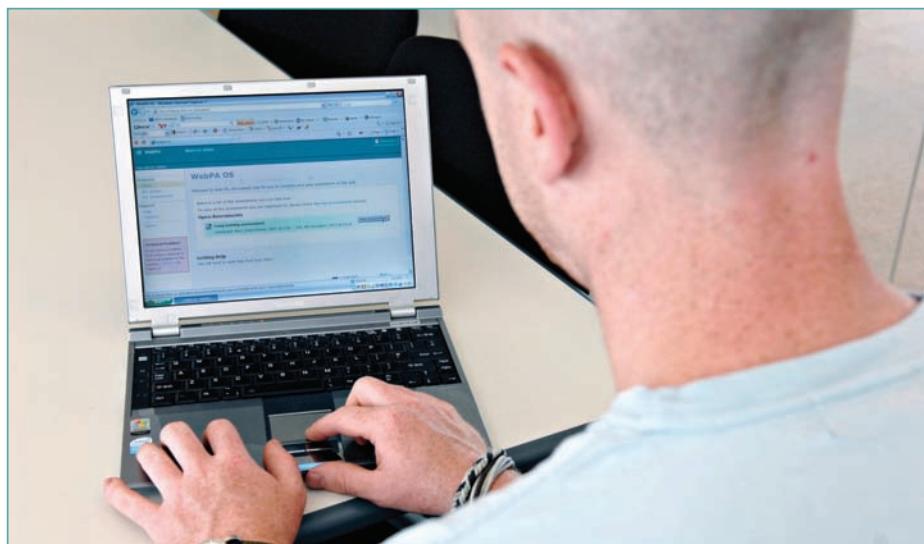
"The Program" refers to any copyrightable work licensed under this license. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

Figure 2. Licence terms and conditions

¹ 'Open Source License Resource Center / Black Duck Software'. Blackducksoftware.com. <http://www.blackducksoftware.com/oss> Retrieved on 2008-11-17



How is the security of the tool addressed?

Due to the number of adopters choosing to use WebPA, the security of the system has been, and is being, continually addressed through fixes provided by the community. Due to the nature of open source development, future security issues need to be raised with the community so that they can be dealt with in a timely and appropriate manner. There are ways to help keep WebPA a secure tool – to find out more read the briefing paper on joining a community of developers and getting support.

Integration with institutional systems

The WebPA system can be linked to other institutional systems as required. As you have access to the system's underlying code (written in PHP and MySQL) you can ensure integration with the Student Information Systems (SIS) for your institution and perform testing on the system before piloting with academic tutors and students. Community members have contributed to the development of a seamless login module for use with the Blackboard Vista VLE <http://webpa.svn.sourceforge.net/>

WebPA OS

Welcome to WebPA, the easiest way for your students to carry out peer assessment reviews on the web. Using this system, students doing group work activities can mark each other's contributions, providing each student with an overall score.

WebPA contains the following sections:

- my forms**: Create peer assessment forms for your students to complete. You can re-use your forms with many different assessments.
- my groups**: Organise your students into groups. You can create new groups from scratch, or use existing groups that have been set up by other staff members.
- my assessments**: Create, edit and schedule your peer assessments sessions so they only run how and when you want.

Getting Started

The fastest way to get started is for you to choose **my forms** from the left-hand menu, there you can begin creating a peer assessment form that your students will use later to grade each other.

Figure 3. WebPA out of the box

viewvc/webpa/branches/bb_powerlink/.

Further contributions are being developed for other VLE systems.

What about WebPA's scalability?

WebPA can be used by one academic tutor with a small cohort or with a number of academic tutors and their associated cohorts. Figure 4 shows the increase in usage at Loughborough University over a four year period. The largest single cohort of students to carry out an assessment so far has been 290. In contrast, at the University of Wales, Newport there is currently just one academic tutor with 30 students.

How can I future-proof WebPA?

Ensuring that WebPA is future-proof is another common concern. However, by adopting a system that is open source, you have a copy of the underlying source code. This enables you to customise and update the tool to suit your institutional needs. Within the community there are other institutions who have adopted WebPA and are making changes which are subsequently being released back to the community through SourceForge. Through this collaborative approach you and your university will benefit from these new features and security updates as the tool is continually developed and maintained.

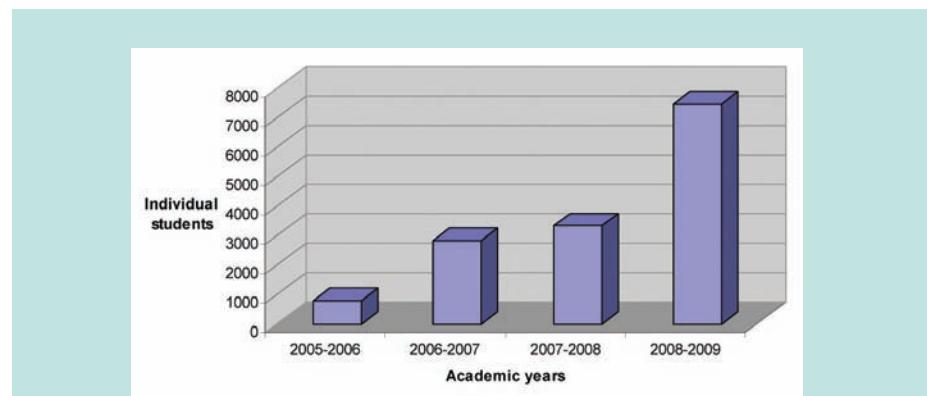


Figure 4. Increase in number of students being put though the WebPA tool at Loughborough University

Thinking ahead

Experience has shown that nearly all WebPA pilots have been successful and quickly expanded to many users, often beyond the initial department. If possible, plan for future growth and usage from the outset. For example, the University of Hull has WebPA centrally hosted on its own server.

Tailoring WebPA for my institution

WebPA has several, easily configurable settings that you can change to get up and running quickly. For example, you can configure the tool to change the 'help' email address <http://www.webpa.ac.uk/?q=node/211>.

More detailed configuration is optional when putting the tool into practice, including automatic emailing and the provision of feedback structures, which will need to be defined by the academic tutor or learning technologist/educational developer.

Another common area is changing the look and feel of the tool to better fit your department or institutional scheme (See Figure 5). Documentation on changing the look and feel is available from <http://www.webpa.ac.uk/?q=node/311>.

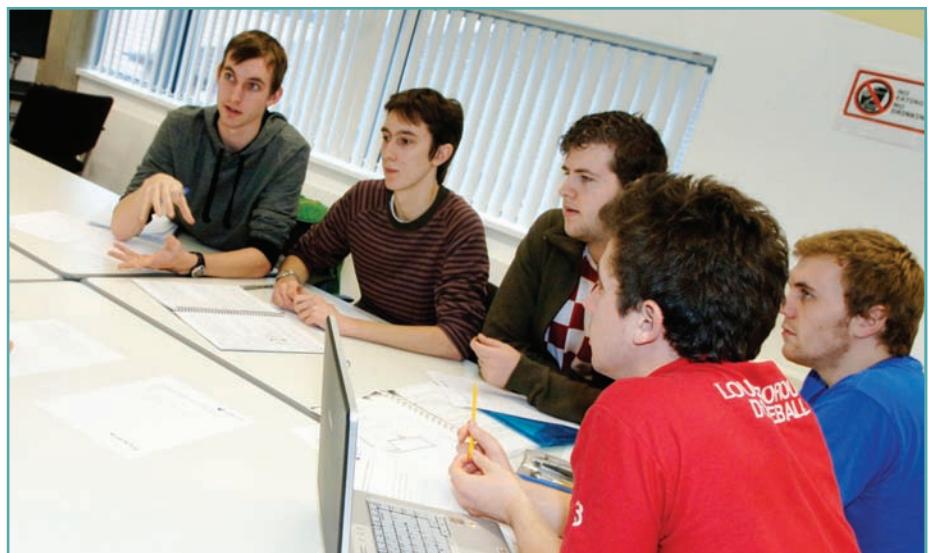
Cost implications

When considering the cost implications of the WebPA tool, there are a number of factors which need to be taken into account. One of the main areas for consideration will be the total cost of ownership (TCO) in implementing and running WebPA. This TCO will be dependant on your institution and the decisions made by the team implementing WebPA.

The TCO depends upon a number of varying factors beyond the implementation phase and the systems architecture. For instance, if the implementation is on proprietary web servers (e.g. a Microsoft 2K server) then costs may be incurred. Consideration is required as to whether the cost is direct, through the requirement of the server for WebPA alone, or if it is indirectly incurred, through a server being available for the installation of the tool. Still, there are other, longer term costs that need to be factored in. These long term costs include the support of the tool, training, and maintenance beyond any pilot.

The screenshot shows the UNSW WebPA OS homepage. At the top, there's a blue header with the UNSW logo and a search bar. Below the header, a sidebar on the left lists 'Tutor', 'Support', and 'Technical Problems?' sections. The main content area is titled 'WebPA OS' and contains sections for 'my forms', 'my groups', and 'my assessments'. A 'Getting Started' section at the bottom provides instructions for new users.

Figure 5. Example of Institution specific corporate layout



Initial implementation may be cost-free if a server is available for the piloting of tools within the institution. It is then at the next stage, as the piloting ends and embedding takes place, when costs are more likely to become evident. This should not dissuade you from supporting an installation but rather ensure that you are fully informed when the time comes to move on from a pilot, particularly as open source is seen as being 'free'.

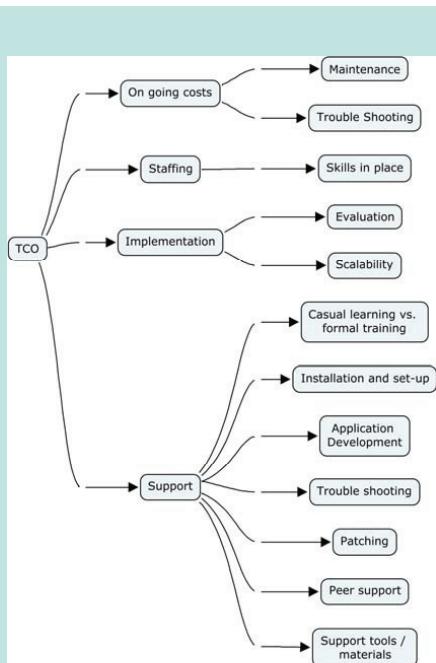
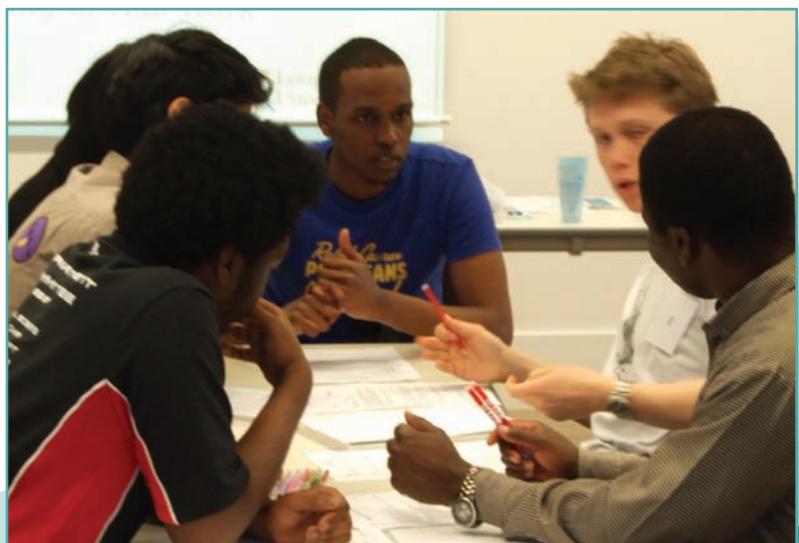


Figure 6. Total cost of ownership factors



Section 4

Publications

Workshops/events/seminars

Chin, P. A. (2007) seminar on WebPA, University of Hull, UK.

Chin, P. A., Loddington, S. and Wilkinson, N. (2007) WebPA training session, University of Hull, UK.

Chin, P. A. (2008) *WebPA for PGCEHE Staff* (Postgraduate Certificate in Higher Education), University of Hull, UK.

Loddington, S. P., Wilkinson, N., Bates, M. R. N., Crawford, A. R. and Willmot, P. (2008) Discover WebPA: an online self and peer assessment system, *EE2008: International Conference on Innovation, Good Practice and Research in Engineering Education*, 14-16 July 2008, Loughborough, UK. Available at <http://www.engsc.ac.uk/downloads/scholarart/ee2008/w005-loddington.pdf> [accessed 31 July 2009].

Loddington, S. P., Wilkinson, N. and Moron-Garcia, S. (2007) *Web peer assessment: an online tool for assessing group work*, University of Coventry, UK.

Willmot, P. (2007) *Peer assessment in team projects*, Engineering Learning and Practice Research seminar, University of Western Australia, Faculty of Engineering, Computing and Mathematics, Available at <http://www.mech.uwa.edu.au/~jamest/eng-work/seminars.html> [accessed 31 July 2009].

Wilkinson, N. (2008) *WebPA at Using technology to enhance learning, teaching, assessment and feedback*, Cardiff University, UK. Available at <http://www.engsc.ac.uk/nef/events/e-assessment.asp> [accessed 31 July 2009].

Loddington, S. P., Wilkinson, N. and Bates, M. R. N. (2008) *Discovering peer and self assessment of group work using WebPA*, M1/M69 Staff Development Link, Loughborough University, UK.

- Loddington, S. P. and Wilkinson, N. (2008) *Online peer assessment for HE, assessment for learning: how does that work?* Northumbria University, UK.
- Wilkinson, N. and Loddington, S. P. (2008) *WebPA: an introduction to online peer moderated assessment*, University of Derby, UK.
- Wilkinson, N. (2008) *Using technology to support the student learning experience*, JISC Netskills, University of Oxford, UK. Available at <http://www.netskills.ac.uk/content/products/workshops/range/jasls.html> [accessed 31 July 2009].
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- Wilkinson, N. (2008) WebPA, JISC CETIS Assessment-Enterprise-Portfolio meeting 2008, University of Strathclyde, UK. Available at http://wiki.cetis.ac.uk/Assessment-Enterprise-Portfolio_meeting_2008.html [accessed 31 July 2009].
- Wilkinson, N. and Moron-Garcia, S. (2008) WebPA user-group workshop, University of Coventry, UK.
- Wilkinson, N. (2008) *Introducing WebPA workshop*, University of Coventry, UK.
- Willmot, P. and Wilkinson, N. The WebPA Project: shortlisted nomination for IMS Learning Impact Award presented at the Summit on Global Learning Industry Challenges, Austin, Texas, USA, 12-15 May 2008, For details see <http://www.imsglobal.org/pressreleases/pr080515.html>
- Wilkinson, N. (2009) *WebPA, assessment matters: new and creative forms of assessment and feedback*, Higher Education Academy and JISC collaboration internal workshop, Leeds, UK.
- Wilkinson, N. (2009) *WebPA e-assessment live*, Loughborough University, UK.

In addition, the WebPA project team have run the following three events at which members of the project team and users have all presented:

- Workshop on peer assessment in Engineering and Physical Sciences (2007) Loughborough University, UK. Available at <http://www.engsc.ac.uk/nef/events/peer-assessment.asp> [accessed 31 July 2009].
- User group meeting (2008) *Conference Aston*, Aston University, UK.
- Peer assessment, Physical Sciences Centre, Engineering Subject Centre, WebPA project, January 2009, *Manchester Conference*.

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- Chin, P., Willmot, P. and Crawford, A.R. (2006) 'Electronic peer assessment tools for multidisciplinary use'. Proceedings of the *Conference of the International Society for Scholarship of Teaching and Learning*, November 2006, Washington D.C, USA.
- Harker, M. and Bates, M. (2007) The Evolution of WebPA (online peer moderated marking system) at Loughborough, *JISC Online Conference*, June 2007, online.
- Wilkinson. N. and Bates. M, (2007) WebPA: an online peer assessment tool. *Connections: sharing the learning space - Learning and Teaching Conference 2007*, July 2007, Brighton University, UK.
- Wilkinson, N and Bates, M. (2007) WebPA an introduction to online peer moderated assessment, *ULTAC 2007*, July 2007, University of Derby, UK.
- Wilkinson, N. (2007) A reusable model for usability testing of online teaching and learning applications, ALT-C, September 2007, Nottingham, UK.
- Gordon. N., Bateson. T, Chin. P., Hanson. S., and Wilkinson. T. (2009) Encouraging team skills through enhancing engagement: the use of peer and self assessment in group work. *University of Hull Annual Learning and Teaching Conference*, January 2009, Hull, UK. Available at <http://www.hull.ac.uk/UALTC/Registration/Encouraging%20team%20skills%20-%20Gordon%20Bateson%20Wilkinson%20Chin%20and%20Hanson.pdf> [accessed 31 July 2009].
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- Pond, K., Willmot, P. and Palermo, O. A. (2008) Effective deployment of web-based peer review marking of group projects. *Higher Education Academy Subject Centre for Business, Management, Accounting and Finance 3rd Annual Conference*, April 2008, Edinburgh, UK. Available at http://www.heacademy.ac.uk/business/events/detail/2008_BMAF_Annual_Conference [accessed 31 July 2009].

Willmot.P., Pond, K., Loddington S. P. and Palermo, O. A. (2008) Perceptions of peer assessment in university teamwork. *International Conference on Engineering Education*, July 2008, Pecs/Budapest, Hungary. Available at <http://iceee2008hungary.net/download/fullp/index.html> [accessed 31 July 2009].

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Wilkinson, N. (2008) WebPA. *Association of Civil Engineering Departments Annual Conference*, October 2008, Bradford University.

Wilkinson, N. (2009) WebPA. *Supporting the iGeneration Conference*, January 2009, University of Ulster, Belfast, UK.

Articles

Bates, M. (2007) WebPA: online peer moderated marking system for UK higher education. *D-Lib Magazine*. Available at <http://www.dlib.org/dlib/january07/01inbrief.html> [accessed 3 August 2009].

Higher Education Academy Engineering Subject Centre (2007) WebPA: an online peer assessment system for HE. *transLate*, issue 20. Available at <http://www.engsc.ac.uk/downloads/pdfs/newsletters/translate20.pdf> [accessed 3 August 2009].

Blanco, E., Gardler, R. and Wilkinson, N. (2007) WebPA: the road to sustainability. *OSS Watch*. Available at: <http://www.oss-watch.ac.uk/resources/cs-webpa.xml> [accessed 3 August 2009].

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- Loddington, S., Pond, K. Wilkinson, N. and Willmot, P. (2009) The development and evolution of an online peer-moderated-marking tool: WebPA. *British Journal of Learning Technology*, 40 (2), 329-341
- Pond, K., Coates, D. S. and Palermo, O. (2007) 'Student experiences of peer review marking of team projects. *International Journal of Management Education*, 6 (2), 30-43.
- Willmot, P. and Crawford, A. R. (2007) 'Peer review of team marks using a web-based tool: an evaluation. *Engineering Education: Journal of the Higher Education Academy Engineering Subject Centre*, 2 (1), 59-66. Available at <http://www.engsc.ac.uk/journal/index.php/ee/issue/view/21> [accessed 3 August 2009].

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IMS Global Learning Consortium announces 2008 Learning Impact Awards recipients. Austin, Texas, USA, 15 May 2008. Available at <http://www.imsglobal.org/pressreleases/pr080515.html> [accessed 3 August 2009].

JISC project shortlisted for international award. JISC, 20 February 2008. Available at <http://www.jisc.ac.uk/news/stories/2008/02/webpa.aspx> [accessed 3 August 2009].

