Learning Online, Supporting Online: developing tutorials for the virtual learning environment.

Rachel Adams[*]

Information & Learning Services, University of Salford

This paper reflects on the process of designing, creating, promoting and evaluating an online support resource. The project described created two interactive tutorials to support the use of Blackboard, the institutional VLE. Useful lessons have been learnt from the process of creating these resources. The evaluation has demonstrated that while the tutorials have been positively received, and those who had not used them were reasonably open to receiving support in an online environment, there remains a major issue around support for those who lack confidence with computers and who may, if not supported, be left behind in an increasingly digital environment.

Keywords: virtual learning environment, VLE, learning technologies, student experience, online support.

Introduction

The increasing focus on e-learning activities and the associated use of learning technologies within Higher Education in the UK has been widely researched in recent years (Blass & Davis 2003; Cotton & Gresty 2006). Development of successful e-learning resources requires a change in approach, and the support that learners require when learning in an online or blended learning environment differs to traditional classroom support.

The University of Salford established its Learning Technologies Centre (LTC) in 2003 following a two year pilot of Blackboard as the virtual learning environment (VLE). With Blackboard established as the institutional VLE, the LTC become the focus of support for university staff wishing to make use of learning technologies. Reviews of Blackboard use in 2008 showed an estimated 16,201 users logging in regularly to approximately 4,093 sites.

Prior to August 2007 the process and quantity of support for Blackboard varied across the institution. A series of half-day training courses were available for staff. Take-up was relatively low in comparison to the estimated number of users, with no central requirement on staff to attend sessions.

No centralised training provision existed for students. For some, their only classroom instruction came as a 5 minute demonstration during their library and computing induction. Others received training from staff connected to their programme of study, or members of the Information Services Division (ISD), subsequently renamed

[*] Email: r.adams@salford.ac.uk

Information & Learning Services (ILS), who provide library and computing services and manage the Blackboard system.

This paper reflects on the experiences and outcomes of a 6 month project to develop interactive, online tutorials in the use of Blackboard at Salford University in order to become the main focus of support for users of the VLE. The process of designing, producing and the subsequent evaluation of these packages is described.

Background

Reviewing the evidence

A web search at the start of the project revealed few comparable examples. Several institutions provide links to user guides or Flash files, one or two had created a module within their VLE to demonstrate its main features, but there were very few examples of support materials on the scale planned in this project.

Literature searches identified material relating to the provision of online content, but none were specific to VLE tutorials. The majority focused on online library instruction or the challenges of teaching online.

While useful lessons were learned, much of the evidence concerned students engaging in an online community, or dealt with issues around assessment and feedback. The evidence for online library instruction was more closely related to the project, but here the materials discussed were generally developed for students to work through in a linear fashion in order to achieve set objectives.

The aim for the Blackboard Online Tutorial was to allow users to define their own path through the content to support their subsequent activity within the VLE. It was anticipated that use would vary from those who worked through most or all of the content to learn about Blackboard before they began to use it, to those seeking help at the point of need when faced with a specific or unfamiliar feature.

Choosing to support online

Although IT skills and confidence levels have increased for the majority in recent years, there are still a number of university members who would be uncomfortable accessing support if it were provided online, and others whose limited IT access off campus would prevent them accessing electronic support away from university.

The benefits of providing support online outweigh these potential pitfalls. As Blackboard is the virtual learning environment and the university, supported by strategic documents such as its Learning Technologies Implementation Plan 2005-08, encourages online learning activities, the most appropriate medium for Blackboard support would seem to be online (Bains & Jones 2003, 242).

Developing the tutorials online would provide users who previously had no access to support, for example distance learners and hourly paid teaching staff, the opportunity to develop and to feel supported in their use of Blackboard and online resources.

Online content is more readily available as a resource. It can be delivered without the constraints of teaching time or room availability, and is available at the user's point of need. It was important that the development of the tutorials allowed users to access support in a flexible way, providing a reference tool to meet individual need, rather than the more prescriptive approach of a pre-defined training session.

By providing support for Blackboard in an accessible format it was hoped the need for face-to-face teaching would reduce, freeing up staff time across the institution. As more people would be able to access the online package than had easy access to classroom instruction there was also potential to increase the use of Blackboard.

Developing the application

The project defined two major objectives: to provide engaging online training on Blackboard, and to offer through the tutorials examples of good practice in developing interactive content.

To meet the second objective, the tutorials were developed using Course Genie, a Horizon Wimba product (now known as Wimba Create) which allows Microsoft Word documents to be converted into HTML content; and Captivate, an Adobe (formerly Macromedia) product that allows recording of screen activity delivered as Flash animation.

Course Genie was already being used by staff across the university to provide teaching and learning content to students in an interactive, easily digestible format. Captivate was used less widely. Neither package required the user to have prior technical knowledge.
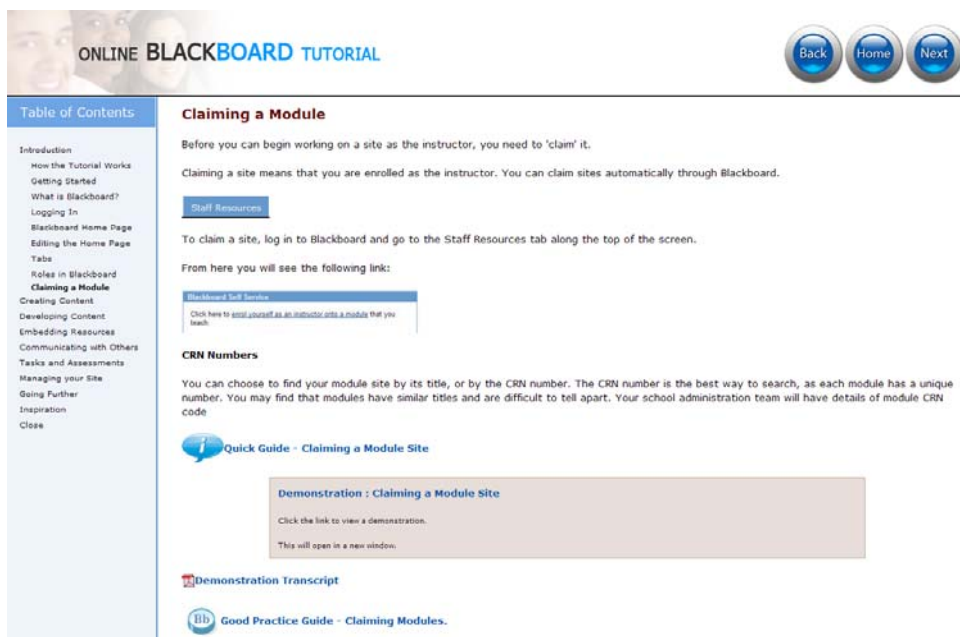

Figure 1: Example screen shot from the tutorial.

Academic, learning technology and ISD staff involved in teaching and supporting students provided their input into the project from an early stage and were given access to test areas as content was created and developed.

A student package was developed first. Each content area contained short passages of text giving basic information or instruction; flash animations demonstrating the task, many of which also allowed the user to test their own skills through a training simulation; and PDF guides giving step-by-step instructions (Figure 1).

A staff tutorial followed the same basic path (Figure 1), but aimed to do more than simply provide information on how to use the system. An 'inspiration' area was developed containing case studies from staff who were successfully using aspects of the system, and a series of 'good practice guides' which gave tips and examples of how to make best use of tools such as discussion boards and announcements.

The mix of formats and levels of information aimed to meet the varied levels of knowledge and experience that tutorial users would have. Providing information in a range of formats also assists with individual's learning style preferences. Dewald (1999, 28) compares textual information to a lecture and graphical elements to a demonstration; this analogy works well here, with the traditional classroom sessions based in PC suites involving a mix of instruction, demonstration and activity now replaced by these online tutorials with their text, graphics and animations.

Testing

A separate literature review was undertaken to establish a process for testing the packages prior to launch. The key issue was around usability: did the design, layout, content and navigation meet the needs of the user; could the tutorials successfully operate as standalone packages? (Lanzilotti et al 2006; Botturi et al 2005)

A small number of staff and students took part in testing. After a review of potential methodologies, it was decided to use a 'think-aloud' approach (Cotton & Gresty 2006 & 2007). Testers were given a structured activity to complete and were asked to vocalise their thoughts and actions. This allowed the reviewer to understand the process of completing tasks.

A second round of testing also took place on and off campus to ensure any issues relating to technology and access were identified and resolved.

Promotion

The tutorials were completed in July 2007. Their development had run alongside a project to redesign the interface for Blackboard and the upgrade to version 7 of the system.

A small number of briefing sessions were held for each faculty in the university to give staff an overview of the new interface and upgraded system and to promote the tutorials as support.

At the start of September 2007 the University hosted the Education in a Changing Environment conference, where the project was given as a poster presentation.

After considering a range of promotional leaflets, it was decided to create a publicity campaign using 'beer mat' style coasters. These were sent to all staff, student halls of residence, and handed out at the Fresher's Fair and other promotional events throughout the year. They were also available at support desks in libraries.

Brief details of the tutorials were posted in two key training brochures for the University and the student ISD induction booklet.

An animation was added to the login page of Blackboard, and a static version of this image was included in the screensaver which displays on student open access PCs.

Evaluation

The project formally completed in July 2007 as the tutorials went live, however follow-up evaluation took place in March 2008. An online survey to all staff and students was conducted. This sought feedback from those who had not used the packages as well as those who had. A paper version of the survey was handed out to students in the main library and in various social spaces and these results were added to the overall totals. 263 responses were received in total.

The survey results were divided into responses from people who hadn't used the tutorials and those who had. Responses were received from undergraduate and postgraduate students and academic and support staff across all four faculties and a small number of staff from the support services. The highest responses were from undergraduate students and from the Faculty of Health and Social Care.

Those who had used the tutorials gave the following responses:

98% of responded said they used Blackboard for study or work at the university.

49% found out about the tutorial through a member of staff or at a training session. 30% discovered it while using Blackboard. 17% saw the animation on the homepage of Blackboard and 8% were informed by a colleague or a member of staff. Only 3% saw one of the promotional coasters produced at the end of the project.

The way people made use of the tutorial varied. 32% used it once or twice to find out about a specific tool or feature; 27% worked through most or all of the content when they first began to use Blackboard. 17% used it regularly as a reference and 24% had a look at it but hadn't been back to use it since.

79% of those who had a specific question found the answer. The 21% who did not find answers were able to provide useful feedback on new additions to the content. Throughout both tutorials there were printable guides, only 27% had made use of this option, with 73% saying they had not printed or saved anything from the tutorial.

Users were asked to rate the following areas: overall impression, navigation, clarity, style/layout, usability and content. The majority of responses (70% upwards) rated each area as good or excellent (see Figure 2).
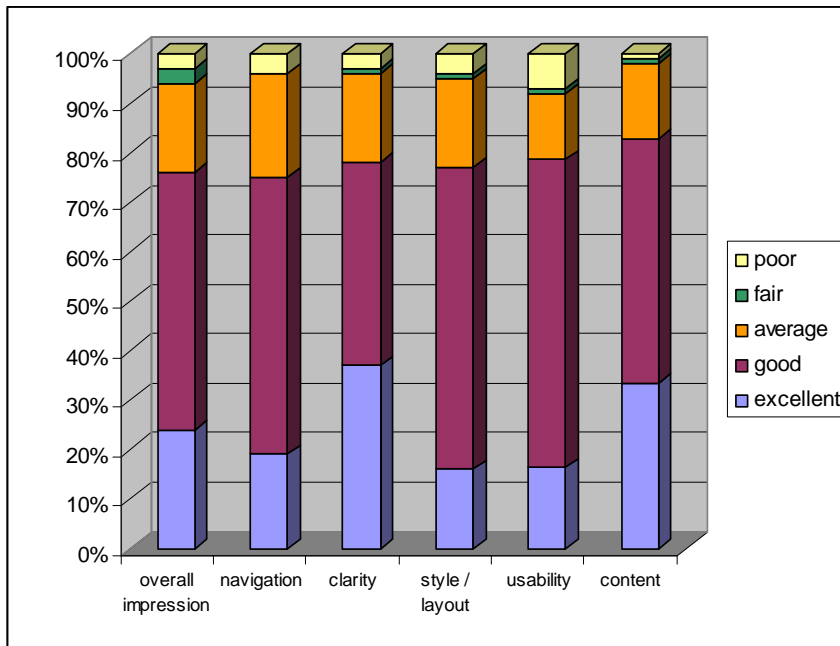

Figure 2: Rating of the tutorial by those who had used it.

95% felt that the tutorial had made using Blackboard easier and 64% said they had used more features in Blackboard as a result of what they had learnt in the tutorial.

Overall, 97% said using the tutorial was a positive experience.

Respondents were asked about their knowledge of Blackboard and their confidence in using computers. Knowledge of Blackboard was mixed: 27% had no experience prior to using the tutorial; 25% had very limited experience; 29% had used some features and 19% had used it a lot.

57% reported their confidence using computers was high and 42% said they were moderately confident. Only 1% of those who had used the tutorial said their IT confidence was low (Figure 3).
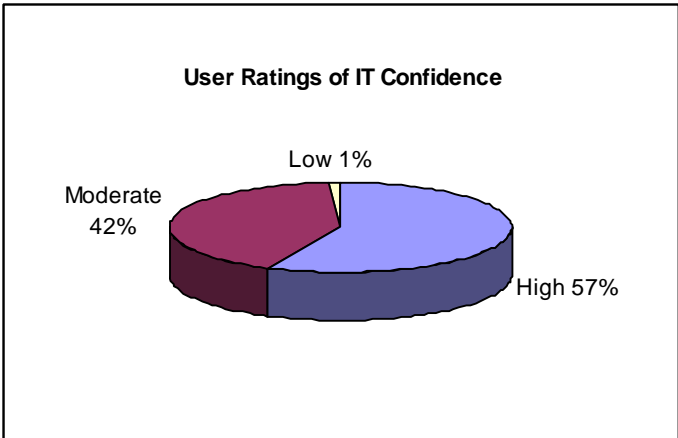
User Ratings of IT Confidence

Low 1%

Moderate 42%

High 57%

Figure 3: Response from those who had used the tutorial on their confidence with IT.

Those who had not used the tutorials gave the following responses:

96% had used Blackboard for study or work at the university.

Knowledge of the tutorials was mixed; 52% who hadn't used the tutorials knew they existed, 48% did not.

50% reported they currently receive support from colleagues or fellow students. 23% were given support by a member of staff, 24% from the IT and Library service desk and 11% from a user guide. 21% reported they currently received no support.

51% said they would prefer to receive support for Blackboard online. 35% would prefer face-to-face provision in a one-to-one environment for example at a support desk, only 14% would prefer classroom training. A comparison between these responses and those received for the group who had used the tutorials show that online is the preferred choice for the majority (51% for both groups), although second choice preferences varied between the two groups (Figure 4).
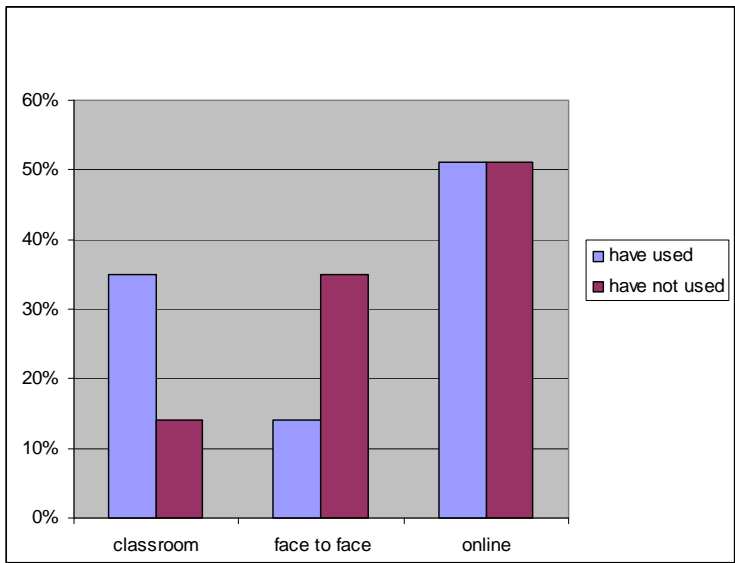
Figure 4: Comparison between those who had and those who had not used the tutorial on how they would prefer to receive support in the future.

Discussion

The survey results have raised some interesting issues. Of those who had not used the tutorials, approximately half knew they existed, the majority do currently make use of some form of support, and approximately half would prefer to access support online. This is a positive result in terms of the future use of the tutorials, in that users are open to accessing material in an online format and do need support. The question then is why had they not used the tutorials?

More in-depth analysis of these figures showed that of those who knew the tutorials existed but had not used them, 49% would prefer online training. So, they were aware the system existed and would opt in theory for an online resource, but when they needed support they appear to have returned to previously used sources rather than trying out the tutorial.

Truly embedding a support system like this takes time. While people may know that the tutorials exist, when it comes to getting support they will often return to the source they have always used, rather than trying something new. As staff across the university become familiar with using the tutorials as their first port of call it is hoped that they will begin to encourage students to do the same. To achieve this aim, promotion needs to take place through a range of channels and must be an ongoing process.

Examining the results further also highlighted that of those who had not used the tutorials and did not know they existed, 52% would prefer online training. This demonstrates that promotion and publicity needs to continue as they have not used the packages because of a lack of awareness that such support exists.

Those who had used the tutorials provided positive responses on the whole, and comments received have provided some useful feedback in terms of developments and additions to content. One of the most striking responses here was around the respondents' confidence in using IT. Only 1% of respondents who had used the tutorial rated their IT confidence as low.

Confidence is a key issue in encouraging users to make use of online support. It is often wholly unrelated to their knowledge, experience or capabilities with IT equipment or resources. Those who report a low confidence may be as capable as a confident IT user, but they are unaware of, or lack belief in their skills and prefer wherever possible to access support face to face rather than online. This is borne out by this survey, as the respondents rating their IT confidence as low said they would prefer classroom training.

If the survey responses are representative across the university then the tutorials are not being used by those who feel nervous using computers. This is vitally important,

because it is those who feel less confident who will often need the most support as they are less likely to simply 'have a go' and work out a new system for themselves.

This is not necessarily a problem for the success of the tutorials. If they are able to support the majority who are moderately confident or confident with IT and are happy to access online support, then staff time is freed up to provide face-to-face support for those whose confidence is lower. However recognising that there are users who will not make use of online support quite simply because it is online is important so that access to face-to-face contact can be promoted. Where face-to-face support exists, it can also be used to help these people feel comfortable using the tutorial so that they may begin to move towards online support in time.

Another interesting response came from the success of promotional activities. The majority (49%) of those who had used the tutorials learnt about them from a colleague or a member of staff. A range of promotional activities took place, and the message was widely distributed at the start of the academic year, but it seems that the most effective way of getting people to use a support tool is by word of mouth. This is perhaps unsurprising – we are bombarded with information about new products in all aspects of our life, and we may even take enough notice to remember they exist, but does our behaviour change as a result? Referral to something as a result of a personal recommendation is always a strong incentive and encouraging key staff across the institution to change their thinking and see the tutorials as the primary support tool will lead to a gradual drip-feed approach to encouraging a wider audience to make use of them.

The promotional activities to date have focused on highlighting the packages as whole pieces, drawing attention to their existence overall in order to encourage staff and students to access online support for their use of the VLE. This work is important and should continue, however students are very strategic in their approach to learning, and are predominantly driven by assessment. The next layer of promoting the tutorials is to work towards embedding parts of the content into the tasks they are given. Evidence from research into how students learn suggests they will make use of those resources that ultimately enable them to achieve their assessment goals (Stover, 2004, 42; Moore & Aspden 2004, 23). If a student is required to work collaboratively using a wiki for example, they may not make the connection back to the Blackboard Tutorial in order to find help with this tool. Embedding a specific piece of tutorial content into their instructions will make direct links between the activity and the support that is available.

Conclusions and further work

The initial project to create the tutorials was in itself successful, but has implications for others planning a similar resource. This project was successful because funding allowed for a project officer to be seconded into the role full time, which meant the tutorials were planned and developed systematically. The inclusion of key individuals across the institution in a project team who were willing to give input into the process

was another key factor. Not only did this improve the resource produced, it also assisted at the point of rolling out the finished resource as it was not only promoted by the central unit who created it, but also endorsed by locally based colleagues who had already bought in to the concept.

Creating online resources can be hugely time intensive, however where they are successful this time should be paid back in terms of a reduction in the number of subsequent face-to-face queries or training sessions that occur and potentially an increase in the use of the system (either in terms of the numbers using that system, or in terms of the breadth of resources accessed by existing users). While the project was funded for 6 months in order to allow the packages to be created, there was no official time or funding given for the inevitable ongoing maintenance and development, and online resources do need regular input to maintain their relevance and usability. It is clear from the research that others who have created online materials have identified this issue and have needed to resource ongoing work to maintain the currency of their resource (Bains & Jones 2003, 248).

The evaluation process has given important feedback on the tutorials which is valuable to Salford University, both in terms of the success of the project in producing a meaningful resource and for future planning and promotion of the tutorials.

The evaluation results also raise an interesting question which warrants further research. Only 1% of those who had used the tutorial and completed the survey rated their IT confidence as low (Figure 3). This would seem to suggest that people who lack confidence with computers will not access a support resource which is provided online. Further in depth research is needed to establish how these individuals currently access support, and what mechanisms would allow them to move towards an electronic resource. Much has been written in recent years around the digital divide and the need to include IT skills within definitions of literacy (Martin 2006, 97), and the findings from the tutorial survey would seem to fit into these global issues.

There remains outstanding work around updating and refreshing content within the tutorials and the necessary maintenance an online resource requires. There is also a need to work towards fully integrating the tutorials into teaching & learning activities to ensure use continues to increase and the resource can become the central focus of support for use of the VLE at Salford University; however the results of the evaluation exercise suggest a positive future for the tutorials as a valuable support resource.

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