Implementing Institutional Online Assessment – Addressing the Challenges

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Abstract. This paper provides a case study of a challenging institutional adoption of online submission and assessment. The paper reports on the way in which an institutional strategy and underpinning principles at the University of Glamorgan was implemented, highlighting both good and constructive lessons learnt. A to-do list (what is working) and 'not to-do list' (what is not working) for engaging staff with online submission and assessment is presented.. Seven evidence-based good practices, and the educational ethos for the centralised support team for supporting online submission and assessment, are discussed as an attempt to remove both the internal and external barriers of staff engagement. The findings of this case study show that positive engagement with academics is being achieved. Glamorgan's experience is discussed to provide insights which can be compared and contrasted with experiences in other institutions to inform others who are attempting similar developments while enhancing what we are doing from the feedback on the papers from others in the same or similar environments.

Keywords: Online Assessment, Blended Learning, Technology Enhanced Learning, Institutional Policy, Academic Engagement.

1 Introduction

Blended learning is increasingly being used as a strategy in many higher educational institutions (HEIs) in the UK (JISC, 2005; Sharpe et al., 2006). Modern higher education may experience changes in daily practice as a result of educational technologies being embedded into educational practice. It has changed how stakeholders of higher education such as students and academics gain access to information and communicate with each other. Academics need not carry a pile of books to lectures or print out dozens of handouts; research students no longer need to physically attend the library to renew books or to find a journal article. Instead, the Virtual Learning Environment (VLE), digital library, online journal articles, web 2.0 technologies, online assessment and a variety of educational technologies are pervasive. However, we would argue that although technological innovations have a great impact on the information/ resources accessing and communication aspects in most of the UK HEIs, core assessment-related activities may remain as an optional "add-on" to embed technologies, especially in the context of Welsh HEIs (GWELLA, 2009). Many universities may

provide facilities such as electronic coursework submission with plagiarism detection and publishing results online. Most of these are administrative tasks carried out by faculty administrators and have less engagement by the academic staff. Assessment-related activities are not limited to administrative processes such as the presentation of the student results. It involves the active engagement of academic staff to provide scholarly support, judgments and feedback for both formative and summative assessment. Online assessment refers to the use of educational technologies to digitise, make more efficient and effective; rethink, redesign and even transform assessment-related activities (JISC, 2006). Such assessment rethinking, redesigning and transforming enhanced by educational technologies inevitably involve the intangible expertise and knowledge of the subject area provided by academic staff.

The research on how effective and beneficial learning and teaching with educational technologies has flourished (Kozma, 1994; 2000; Lee and Suliman, 2001; Bates and Poole, 2003). There is also a rich literature which tends to focus either on design and development of the online assessment system and practices (Crisp and Ward, 2008; CAA, 2009); or student/staff perception and experiences of educational technologies in general (Milliken and Barnes, 2002; Bonk, and Graham, 2006; Ziegler et al., 2006; Jones et al., (in press); Holley and Oliver, (in press); Waycott et al., in press). However, the gap between understanding the benefits of online assessment, and having staff engage with it in a day-to-day assessment activities is significant. In general, individual staff engagement is often driven by individual educational beliefs/ epistemology or disciplinary differences, attitudes working with technologies and self-efficacy. (Chew et al., 2009b; Sang et al., 2010). Further investigation of the "engagement", in particular with online assessment, is necessary. This paper adds to the growing amount of blended learning research by using a case study of the institutional practices and experiences of a Welsh HEI – to see how the University of Glamorgan has increasingly engaged its academic staff in online assessment in the year 2009-2010.

2   Institutional Core Strategy and Underpinning Principles at Glamorgan

Institutional engagement with online assessment is a challenging action plans for most of the Welsh HEIs, including the University of Glamorgan. Croft (1994) says that there are two challenges faced by embedding technology in learning and teaching practice: (1) we should have a distinct idea of the purpose(s) we wish to serve, (2) we must maintain the flexibility and imagination to adapt the tool to new uses as they arise. Glamorgan has committed to "the delivery of a first class learning environment incorporating the highest standard of e-learning, tutor facilitation and use of cutting edge learning facilities", that includes the institutional commitment to electronic submission and the increased use of online assessment (L&T Strategy, 2010; UoG, 2010). Glamorgan's first strategic priority is to improve the nature and quality of the student experience (UoG, 2010). Therefore, the institutional priorities are (1) **to provide student experience-centred educational services**; and (2) **to offer the sound tutor facilitation with the flexibility to adapt cutting edge learning facilities**.

Kay (2006) asserts that a successful blended learning engagement, in general, is to challenge the thinking process of academic staff, such as the educational belief and

attitudes towards technologies. Cambridge Advanced Learner's Dictionary (2010) defines the term "engage" as to interest someone in something and keep them thinking about it; and to take part in something. There are five faculties at Glamorgan, Faculty of Advanced Technology (AT), Glamorgan Business School (GBS), Faculty of Humanities and Social Sciences (HASS), Faculty of Health Sport and Science (HeSaS) and Cardiff School of Creative & Cultural Industries (CCI) (UoG, 2009). The "engagement" with "online assessment" at Glamorgan can defined as engaging Glamorgan academics in the five faculties in using "online assessment" – to keep them thinking about and debating the topic; and to take part in the improving, redesigning or transforming of assessment and feedback with (or without if it is not applicable) online assessment.

The University agrees with JISC's (2007) definition of online assessment as the end-to-end electronic assessment processes where educational technology is used for the presentation of assessment and the recording of responses. It involves the assessment process such as coursework submission, peer-assessment, grading ad feedback, traditional examination and quizzes from the perspective of students, tutors and awarding bodies. Swan et al. (2006, pp.1) suggests that technology integration in learning and teaching practices needs to be understood not as an add-on, system-driven embedment, "but one motivated by learning and teaching needs and in which multiple technology choices are readily available to teachers and students both within and beyond the classroom". Chew et al. (2009b) also asserts that the understanding of disciplinary needs and diversity to provide less "ticked-box" exercises in the institutional engagement is essential.

Based on Jones' Blended Learning Continuum (2006), that was adopted by the University in 2005, Figure 1 illustrates a wide range of online assessment tools freely available to both academics and students. The continuum of online assessment, from the electronic submission to the partial tutor-intervention of online grading and feedback or a complete end-to-end computer-assisted assessment, provides more flexibility for academics to decide at which point the best option is, in order to suit the individual's disciplinary needs. At the same time, one may be able to conduct self evaluation and understand more options along the way. The "E-intensive" in this model, however, is not asserted as the best solution. It is a subject-dependant and flexible model acting as an online assessment guideline to individual disciplines and requirements at different point.
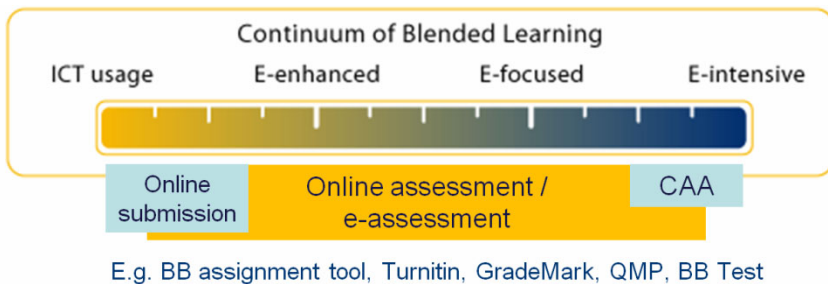
Fig. 1. How to Engage Glamorgan Academics with Online Assessment

Online assessment **must not** simply invent new technologies which recycle the **current ineffective practices** (Ripley, 2004). The Higher Education Academy (HEA, 2010) work with the UK HEIs to support the following assessment practices:

    1.   Assessment feedback
    2.   Plagiarism / academic integrity
    3.   Assessing and recording student achievement
    4.   Methods of assessment: essay-type, MCQ, portfolio and etc
    5.   The assessment process: formative vs. summative

The National Student Survey results (NSS, 2009) indicate that only 65% agree their experience of assessment and feedback is positive. We would stress that it is meaningless to embed new technologies but at the same time "recycle the current ineffective assessment practices". The core principle for institutional commitment to online assessment is that **it is not about promoting new technology to the Glamorgan academics but tools to empower them to improve, redesign and transform the 1 to 5 assessment-related activities listed above (Fig 1).**

3   Good and Constructive Lessons Learnt

3.1   Successful Establishment 2006-2009

The institutional strategy and assessment policy at Glamorgan, discussed in section 2, have provided a distinctive ground for the promotion of online assessment adoption across faculties. The creation of a new post - the Head of Learning and Teaching, in each faculty, has evidenced the commitment of top management. The creation of a new role: the Blended Learning Champions, in each faculty, has empowered the disciplinary-tailored peer-support and engagement. The Learning Zone (CELT Learning Zone, 2008), a blog, acts as an impetus for discussion and communication on innovation in learning and teaching.

There is an ongoing debates about Glamorgan academics maintaining facilitation and full support for students in the move from traditional assessment to online assessment. There are issues such as practicality, technical issues, individual preferences to mark online/offline and how to prepare both staff and students. Jelfs and Colbourn (2002) suggest the need for increased financial support for additional staff development and training. The University has successfully obtained the HEFCW Technology Enhanced Learning Strategy Funding which allows the employment of professional personnel in both pedagogies and technologies to provide holistic support for staff. The establishment of the Excellence in Learning, Teaching & Assessment Awards in 2008 and 2009 (i.e. Excellence and Innovation in Learning and Teaching Practice and the Innovation and Excellence in Student Assessment) acts as a direct link between excellence in learning, teaching and assessment with academic recognition – a formal incentive or rewards system across the University to motivate innovation in learning, teaching and assessment. These approaches helps to ensure is the strategy, policy and practice of online assessment are widely embedded.

3.2   What Is Not Working?

Apart from the successful establishment, the University encountered some challanging experiences which inhibit staff engagement. Phipps (2009) listed the following bad practice carried out by an educational institution which could lead to the disconfirming experience(s) or failure of academic staff engaging with blended learning:

    i.   Making them bring their own sandwiches during the training
    ii.   Telling them something is "cutting edge and you must use it!"
    iii.   Talking about Mac's or talking about technology they haven't got
    iv.   The technology fails
    v.   Technology is too complicated to use
    vi.   Too many pages of user manual
    vii.   Writing a 40-page e-assessment strategy – nobody read/understood it
    viii.   Require them to perform an accessibility audit

In the past, The University of Glamorgan experienced some of the bad practices listed above such as points iv. and v. which, unavoidably led to the disconfirming experiences of our staff with some of the online assessment tools. We must admit that there were some difficult times along the way and we would like to append Phipps's (2009) not-to-do list. Table 1 is based on institutional experiences and lists the barriers hampering Glamorgan academics' online submission and assessment implementation efforts:

Table 1. What is Not Working for Glamorgan

What is not working for Glamorgan	
About the staff development	**About the technology**
• Group too large / training sessions that overrun or lose focus • Putting staff with different level of the technological competence in the same training session • Assuming one-size fit all without considering the disciplinary differences – it would be good to have disciplinary-tailored training sessions • Run a training session introducing pedagogical models - it was it was difficult to explaini and debate the educational "philosophy" to staff who may not be interested in this • Issue with balancing one-to-one support and group training to achieve both efficiency and effectiveness	• The technology is too complicated • Raising expectation of the technology but it may not work as expected later • The system is "down"
About "after sales" services:	
• Making the technology the focus instead of the learning and teaching matter • Ask academic staff to log a call to the centralised ICT support without follow-up • "One man show" - no backup plan or other support alternative when "the person" is not around	

4   How to Engage Staff - What Works?

4.1   Seven Evidence-Based Good Practices

Kay (2006) suggests the several strategies to engage staff in blended learning such as (1) delivering a single technology course; (2) offering mini-workshops; (3) integrating technology in all courses; and (4) modelling how to use technology. At Glamorgan, we have embedded most of these strategies and the following, from top-down, horizontal and bottom-up approaches, to engage the staff.

Top down approach
At the beginning, we strongly assert that a better understanding and support of the top management, head of departments or those "influencers" in individual faculty is very important. This will facilitate more informed decisions about the uptake and implementation of online submission and assessment - as an institutional-wide adoption:

1. Strong support from the Senior Management team of the University
There is the VC's vision statement and a clear institutional strategy that highlight technology enhanced learning, teaching and assessment. Such top-down messages have been disseminated through the institutional websites, blogs and in many committee meetings, e.g. 100% online submission across the institution for coursework where appropriate.

2. "Influence the influencer"
We first target the engagement of the senior members, Heads of Division/Department, Heads of Learning and Teachings etc. After some Heads and "influencers" have attended the awareness raising or training sessions, they have encouraged the whole department/division to engage with online submission and assessment. Such gentle top-down approach is encouraging as they were convinced of the benefits of online assessment for both staff and students. Peer encouragement and discussion also being generated by them in the faculty or departmental meetings. Please see the following email quotes from staff who requested support for e-submission.

> *"Someone told me that there is such tool call Turnitin. Could you please give me some information about it?" ~Staff from the Faculty of Humanities and Social Sciences*

> *"My colleague has attended the online submission training and she recommended me to attend one..." ~Staff from the Business School*

> *"My Head of Division asked me to sign up for the group training..." ~Staff from the Business School*

Horizontal approach
The Horizontal approach is very effective in terms of the self-initiative and willingness from the Glamorgan academics rather than merely the top-down pressure.

3. Short and simple user guide and Frequently Asked Questions (FAQ)

Short and simple user guides are essential. Academics are always busy and occupied by all sorts of scholarly activities such as teaching, students supervising, research and consultancy. A short and handy online user guide and online FAQ is very helpful. There have been many queries from both internal and external academics asking for the in-house tailored user guides.

4. Disciplinary group training

In 2009, 40 group training sessions were delivered and more than 175 staff have attended the sessions. This training has been designed in a way that is disciplinary-tailored – we attempt to use "disciplinary-specific language" in our examples and good practices is shared in the group sessions. We found out these practices stimulate active group discussion and consensus for certain practice and prepare better peer support after the group training. We always obtain positive feedback through emails or by word of mouth after the sessions.

5. One-to-one support

In 2009, more than 200 staff were supported in a one-to-one approach. This is helpful especially for the post training support and staff who lack technological competence. We have developed a better and deeper "customer-relationship management" by providing effective, timely and prompt responses to all sorts of technology enhanced learning and teaching queries. The appreciation emails or cards and the increasing uptake of staff into online submission and assessment is evidence of this good practice.

6. Funded research project

One key method to engage staff is to "use research to support the change". The motivation for collaborative publication and a small pot of research funding is very helpful to both young academics and senior academics. We have successfully obtained research funding from the TurnitinUK and the Education Sandpit project to provide such motivation to engage with staff.

Bottom-up approach

7. Student-driven engagement is the most efficient and effective practice at Glamorgan. Since the Glamorgan first strategic priority is to improve the nature and quality of the student experience (UoG, 2010), Glamorgan academics are striving to live up to the priority – our student experiences. We have often received requests from students and staff such as the following:

> *"I would like to request access to Turnitin for my assignment X" ~Student from the Cardiff School of Creative & Cultural Industries*
>
> *"Would it be possible for you to talk to my supervisor to set up Turnitin for my master dissertation?" ~Student from the Business School*
>
> *"My students request to use Turnitin, please show me how to set it up!" ~Staff from the Faculty of Humanities and Social Sciences*
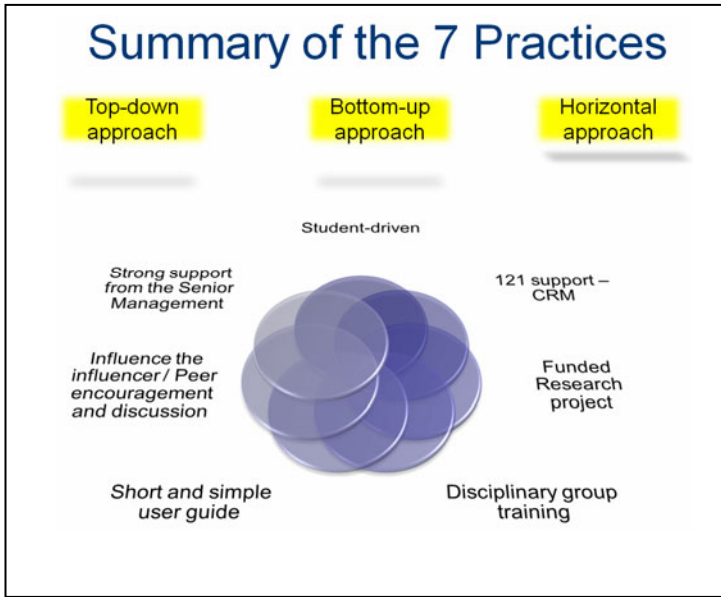
Fig. 2. Summary of the Evidence-based Good Practice to engage Staff

We would like to assert that of all the best interventions used to engage with academic staff, none of them are related to how advanced or how impressive the technology is. All of them are people-processes or people-oriented, not technological processes or technologically-oriented. We would stress that a technological focus in an institutional-wide blended learning adoption is less likely to be a success.

4.2   Educational Ethos for the Centralised Support Team for Online Submission and Assessment

The University of Glamorgan has invested in a centralised support unit - the Centre for Excellence in Learning and Teaching (CELT, 2010) that comprises staff who have a breadth of professional and operational experience in blended learning, education and the use of information and communication technology. The establishment of this multi-disciplinary team is proficient in developing and supporting pedagogy and the development and technology to enhance learning practice (Chew et al., 2009a). There are new roles being in place to support the institutional-wide online submission and assessment commitment, such as the Senior Lecturer in Technology Enhanced Learning, Teaching and Assessment and Curriculum Advice Officer for Technology Enhanced Learning. These academic posts aimed to engage the Glamorgan academics with the pedagogical-oriented of assessment-related activities and offer both pedagogical and technological support. Since most of the 7 good practices discusses in section 3.1 are people-processes and educational processes, the professional

educational ethos is essential for the team. In summary, there are several important factors which inform the ethos of the centralised support personnel:

- Less threatening when promoting online submission and assessment: introduce the range of tools/services and let academics decide which one/ whether to use
- Be sympathic, patient and flexible to deal with "the first timer", all kinds of queries, terminologies and different "voice tones" from academics from different faculty
- Be honest about the limitation of the technologies - should not exaggerate the "wonder'' of e-submission and e-assessment; and should not raise the expectation of academics where the technologies may not work as expected later
- Give a solution, or at least a supportive and prompt response to queries and requests. It is"evangelism", not a daily boring support tasks
- "Whoever makes you go one mile, go with him/her two"
- Good relationship with all faculties members and the centralised ICT support team
- Enthusiastic for both education and technology (online assessment), and the support (promotion and pastoral care)

Ertmer (1999) has proposed two barriers to "evangelising" blended learning to staff: the internal barriers and the external barriers. Internal barriers include the obstacles of individual belief, attitudes and philosophy about learning and teaching. Chew et al. (2009b) expanded that finding to a further aspect – the epistemology and disciplinary differences of individual academics. External barriers are related to the external environment context such as issues related to accessibility, technical support and training. It is almost impossible to engage staff when these barriers are present. The 7 good practices and educational ethos for the support team discussed above are an institutional attempt to remove both the internal and external barriers suggested by Ertmer (1999) and Chew et al. (2009b).

5   Conclusion

There have been national studies concentrating on institutional e-learning or blended learning practices in both the UK and US. The University of Glamorgan is one of a number of UK HEIs which has taken a whole institutional approach to the adoption of online submission and assessment. The paper reports on the way in which an institutional core strategy and underpinning principles at the University and both good and constructive lessons learnt in the past few years. A to- do list (what is working) and a not to do list (what is not working) for engaging those staff with online submission and assessment are reported based on experiences at Glamorgan. Seven evidence-based good practices and the educational ethos for the centralised support team for supporting online submission and assessment are discussed.

   The University of Glamorgan is currently ahead of other Welsh HEIs in terms of online submission and assessment adoption. The findings of this case study show that positive engagement with academics is being achieved, by providing support to more than 40% of the staff in an academic year. Up-to-today, there are 1,026 absolute unique visitors for the Glamorgan's Online Submission and Assessment wiki (2010)

with the top visit content for "Frequently Ask Questions" and User Guides (in power point, PDF and videos). On the other hand, there are increasingly debates across the faculties for the technical limitation, good practices, standardisation and consistency, readiness of both staff and students for online assessment. It will be a continuing and challenging realisation in the up-coming year(s) to engage with the other half of Glamorgan academics population and to cope with the debates. Glamorgan's experience is discussed to provide insights which can be compared and contrasted with the experiences in other institutions to inform others who are attempting this development while enhancing what we are doing from the feedback on the papers from others in the same or similar environments.

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