E-Learning Support For Accredited Work-Based Learning

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Abstract—An increasingly important strategy for higher education institutions (HEIs) operating in a highly competitive globalised education market is to adopt and embed technology enhanced learning in order to better serve both home and overseas learners. The global economic downturn has also focused HEIs on the need to support work based learners who are less willing and able to trade off learning for earning. The University of Glamorgan in the UK has developed the Learning Through Employment (LTE) framework designed to allow individuals already in employment to work towards a university-level qualification relevant to their specific area of work. Its main feature is that the majority of learning takes place through active and reflective engagement with work activities, underpinned by the appropriate academic knowledge and skills. Courses can be tailored around any subject and are negotiated between the learner, the university and the employer.

This paper will focus not only on the way the University of Glamorgan, acknowledged to be a leader in UK e-learning provision, provides e-learning support for work based learners, but also on how this flexible approach to accrediting informal learning meets the growing demand for accreditation of work-based learning programmes to meet the needs of both learners and employers.

Index Terms—Accreditation of Prior Learning, E-Learning, Informal Learning, Work-based Learning.

I. INTRODUCTION

Higher Education Institutions (HEIs) that successfully adopt and embed new learning technologies are better able to not only enhance the experience of students on campus, but also to widen their geographic reach and attract distance learners to their programmes of study [1]. While such strategies bring obvious benefits to a HEI seeking competitive advantage in a globalised education market, there are also advantages for the HEI in serving work-based learners located closer to home.

A. E-Learning advantages and challenges

In addition to expanded access to the HEIs offerings, other advantages for the HEI adopting e-learning include: The enhancement of its international reputation; improved distance support of faculty in course delivery; sharing of digital course materials and learning objects; more effective programme management and monitoring, and reduced operating costs.

It must be recognised that along with benefits come attendant challenges for the HEI. Changes are appearing faster in implementation than in policy; not all HEIs are at a similar stage of development in incorporating blended learning into their policies, strategies and practices; effectively embedding the use of new learning technologies requires a radical re-think: away from tutor-led and towards student-led approaches; away from didactic and towards active learning methods incorporating problem solving, authentic learning and assessment; and collaboration designed to create inquiring communities. In order to effect change the HEI then also needs to fully commit to training in new technology while attempting to overcome faculty technophobia.

However, if new learning technologies are successfully adopted and embedded, faculty benefit from: Greater ability to share faculty workload; increased flexibility in the teaching and learning environment; improved levels of teacher-student interaction; and more transparent quality assurance and enhancement.

Learners benefit from: Greater time flexibility; removal of location barriers; more effective tutoring; effective development of virtual learning communities; increased engagement in learning; increased faculty in student assessment and feedback; and greater personalisation of the learning encounter [2; 3; 4].

The adoption of e-learning is now informing the long-term strategic thinking of many HEIs [5; 6] particularly those in Western nations [7] where the adoption of e-learning is being led by the USA and the UK [6]. Indeed, in the UK, the University of Glamorgan has been recently cited as example of “accelerating growth” [6] in the adoption of blended learning. The benefits of adopting new learning technologies are not limited to HEIs, and other learning providers reap similar organisational benefits. Indeed many HEIs and other learning providers use the same or similar e-learning platforms and virtual learning environments to facilitate learning, whether campus or work-based, and whether accredited or not.

Moreover, professionals now expect blended learning in the workplace. This will affect the expectations of many such professionals when engaged in accredited learning programmes delivered through a HEI. These learners also expect access to similar high quality blended or e-learning environments, particularly when engaged with higher level learning as mature, part-time postgraduate students. However, a relatively recent study [8] found that the influence of technology on learning outcomes was secondary to other learning factors. While this outcome contradicted the findings of previous studies, those studies had researched the effect of technology in isolation to other, non-technological, factors. The effectiveness of the new learning environment depends upon interactions, both student-to-student and student-to-instructor along with instructor support and mentoring, factors which accompany “information delivery technology, course content, and course structure” [9]. Another challenge for maintaining a high quality student
learning experience at a distance is the need to both “tailor teaching strategies differently for on-campus and off-campus students” [10] and the need for innovative approaches to support the learning of off-campus students. Interestingly, given the benefits of adopting e-learning to various stakeholders, a study of Information and Communications Technology (ICT) in web-based teaching at the University of Helsinki [11] found that teachers perceived its benefit to the learning experience to be more positive than did students. Students tend to evaluate a blended approach more positively than a purely online or purely classroom-based learning experience, although are able to access the course content equally via each of the three modes of delivery [3], a view borne out by another study of traditional and online graduate [12]. Yet while these two groups of students evaluated the quality of their learning experiences equally, they appeared to value different aspects of the learning experience, with other studies finding that students accessing blended learning valued the “greater time flexibility and improved learning outcomes” [4]. Both this flexibility and the removal of barriers to distance are also seen as attractors to students [2]. These distinctions become even more important when considering the work-based learner.

B. Work-based learning

A work-based learning programme is defined as one where ‘a major constituent of a programme of study where students are full-time employees, and most of the research-based fieldwork is carried out in the learner’s own workplace’ [13]. This is further clarified as the means through which a discipline is delivered, not the discipline itself. Therefore work-based learning is not a subject for study—it is a rather mechanism for learning [14]. It is also recognised that there are two different types of work-based learning programmes offered by HEIs. Work-based learning may incorporate either learning for employment (e.g. a work placement on a sandwich degree programme or professional development such as a teacher education course), or may incorporate learning through employment (e.g. a company in-house training or personal development programme) [14]. The latter type of learning, which may or may not be enhanced through the use of learning technologies, may not always offer the work-based learner accreditation of their learning, or may not offer accreditation at a high enough level to be of significant value to the learner. The main difference to the work-based learner on a degree or postgraduate programme is in the accreditation by the HEI of the learner’s programme of study, whereas much work-based learning is more informal, and not accredited.

In the UK the issue of accreditation of learning has been brought into sharp focus through a challenging government target aiming for at least 40% of UK adults to achieve a qualification at Credit and Qualification Framework Level 4 (equivalent to the second year of a bachelor's degree programme) or above by 2020. Target achievement may be assisted through developing better processes for assessing work-based learning and accrediting in-company or other prior learning of employees [15].

While it is recognised that not all employers may be willing to finance the accreditation of such learning, particularly in the current economic climate, there is a recognition by employers that work-based learning provides not only suitable opportunities for the learner, but can also contribute to the business objectives of the employer. This is because the employee can gain credit for the learning they have gained in the context of their work, and it is this learning that is assessed, not simply the experience they gain from being employed. Assessing a work-based learner therefore requires a balance between the outputs of competency-based assessment and assessment of the learning process itself through reflection and self-direction [16]. Many work-based learning programmes include the opportunity for the learner to solve the real business problems of the employer. Additionally, the employer can gain highly motivated, highly skilled employees who can learn while they earn, and therefore minimise time taken off their jobs.

If successful in adopting and embedding new learning technologies it is well recognised that the HEI can effectively become “The University of Anywhere”. This concept is of interest to this paper, particularly when considering the differences in approaches to place of study evidenced by learners in the USA and the UK. In the USA, important factors impacting on student choice of place of study are seen to be location, academic reputation, programme of study, and employment opportunities [17]. Once at a place of study, “factors related to the physical environment in which the course is conducted, the course topic, and the course execution, in addition to the instructor’s personality, are significant influences on students’ attitudes toward their classes” [18].

In the UK the main criterion upon which students base a decision about place of study is the programme of study, yet location becomes equally important if students wish to commute to University from home forced by economic changes mainly the decreased levels of maintenance loans, with a personal visit to the location prior to finalising choice deemed “crucial” [17]. Another key difference between UK and US students is the US students’ higher rating of the educational experience, and higher use of reflective thinking practices compared to UK students [9]. A central theme of work-based learning programmes is the integration of reflectivity into assessment.

Place of study therefore assumes less importance for the learner, even on an accredited HE programme, if the HEI is able to support the learner electronically from a distance. The learner who opts for a work-based mechanism of learning often displays specific characteristics that differ from other types of distance learner, such as the e-learner who may be accessing a programme of study where a more traditional programme of study is delivered online, as opposed to a work-based HE programme where the majority or all of the learning takes place in the workplace, with less emphasis on the delivery of subject content more associated with a traditional HE programme.

It is important to note that the work-based learner also displays specific characteristics that differ from the traditional campus-based learner. The work-based learner is likely to seek a university qualification for their work. The work-based learner may not necessarily have formal qualifications but can evidence the ability to work at the relevant level, or may be already qualified but seeking a framework for continuing or extending personal and professional development. The work-based learner may
also be someone who would find a conventional full-time or part-time university course difficult to attend. This could be for a variety of reasons. Perhaps the local HEI does not offer an appropriate programme of study at appropriate times to fit in with work and / or family life. It may be that the most relevant HEI programme may not be offered locally or may not be offered online available. A more compelling reason is often that the work-based learner does not wish to sacrifice earning for learning. Through a work-based programme the learner does not need to make this pragmatic trade-off, as they may study a HE level qualification that does not differ in level from that traditionally taught on campus. The real difference is that accredited work-based learning programmes are designed in such a way that the workplace becomes the context for some or all of the learning and assessment.

This leads to a final challenge for the HEI, to embed the philosophy of informal learning into its accreditation processes in order that it can better serve the needs of work-based learners. However, embedding any innovation within HEIs is not usually easy. Accrediting work-based learning at HE level is challenging not least from within the HEI itself, which may well face barriers from faculty being required to change traditional long-standing existing practices even if the institutional strategy and policy developments either embrace or actively promote more contemporary approaches to teaching and learning.

II. THE UNIVERSITY OF GLAMORGAN APPROACH

The University of Glamorgan (UoG), situated in the South Wales Valleys in the UK, is not alone in attempting to take advantage of the growth potential offered by the adoption of new educational technologies to serve students at a distance with a blend of traditional and e-learning techniques [7; 19; 20; 21; 22; 23], and by integrating e-learning into its long-term strategies [5; 6].

Moreover, the university is already serving a relatively high proportion of part-time compared to full-time learners, many of whom are older than the ‘typical’ traditional student, and from non-traditional backgrounds. Of over 21,000 students, around 40% are undergraduates studying part-time accredited HE programmes, and 9% are studying part-time postgraduate programmes. Over 31% of the University’s students are over 30 years of age.

A. Blended learning at UoG

From a pedagogic perspective there is evidence that while the adoption of e-learning is now becoming more widespread, it has not necessarily been either appropriately analyzed or conceptualized [24]. The United Kingdom ‘Department for Education and Skills’ (DfES) suggests “if someone is learning in a way that uses information and communication technologies, they are using e-learning” [25]. However, it became increasingly accepted to view the adoption of learning technologies as blended learning (i.e. blended with traditional techniques) rather than e-learning, which tends to have an attendant tacit assumption that such courses are delivered either wholly, or mainly, online and are therefore somehow different from traditional learning.

Three alternative definitions of blended learning have been identified, varying from “the integrated combination of traditional learning with web-based online approaches”, through “the combination of media and tools employed in an e-learning environment”, to “the combination of a number of pedagogic approaches, irrespective of learning technology use” [26], illustrating that “blended learning means different things to different people, which illustrates its widely untapped potential” [27]. Others are more critical, offering assertions that “there is little merit in keeping the term ‘blended learning’ as it is currently understood. It is either inconsistent (and so useless as a way of understanding practice) or redundant, because it simply describes practice within higher education more generally, and it attributes to learning something that, in terms of what we know, only applies to teaching or instruction” [24]. However, these authors do not condemn the practice of blended learning, just the term. Their suggestion is that the word “blended” be “abandoned or, at the least, radically reconceived” (on the assumption that the dichotomies implicit in the phrase are “suspect”). They also call for the abandonment of the word “learning”, as it implies “instruction, teaching, or at best, pedagogies”, suggesting the future on blended learning will only be “redeemed” if it is “theoretically coherent, philosophically defensible, and pragmatically informative” [24].

The University of Glamorgan had long adopted a continuum of ‘blended’ learning which indicates the blend as the use of online medium increases from basic ICT usage to intensive ICT usage (Fig. 1). The development of this continuum both stemmed from and informed the University’s involvement with the E-College Wales project. In partnership with 6 colleges around Wales the University of Glamorgan established E-College Wales which operated between 2001 and 2005 to offer one of the largest e-learning projects in Europe. These courses were funded in part by the European Union via its European Social Fund and European Regional Development Fund, due to the location of the University in an Objective One funding area. Since the end of the project, many of the courses previously offered by E-College Wales have now been integrated into its regular programmes of study as blended learning became integrated into all aspects of the University’s operations across all of its faculties.

More recently, there has been a move towards the use of the term ‘technology enhanced learning’, that is seen to overcome the definition and conceptual difficulties associated with the term ‘blended learning’ as identified above, and is more appropriate to actual practice than the more narrowly defining term ‘e-learning’.

Figure 1: University of Glamorgan’s Continuum of Blended Learning
B. Work-based learning at UoG

In order to meet the challenges of accrediting informal learning, particularly that engaged with in the workplace, in 2009 the University of Glamorgan designed and implemented a new shell framework for Learning Through Employment. The framework fits with the UKs Qualifications and Credit Framework (QCF) and Credit and Qualifications Framework for Wales (CWF) [28], articulating progression pathways from HE entry levels through to postgraduate study. National Vocational Qualifications (NVQs) are based on National Occupational Standards (NOS) that set out not only what people in particular occupations should know, but also how they need to apply that knowledge to perform their jobs well. NVQ level 3 is the typical entry level to HE. All Advanced Modern Apprenticeships conform to a framework comprising four components – an NVQ level 3, key skills at specified levels, a technical certificate of underpinning knowledge, and an awareness of employment rights and responsibilities. Apprentices and other work-based learners are an important and growing group of potential HE learners. For some time the government and its advisors have been advocating progression from Advanced Apprenticeship to higher education, particularly via Foundation Degrees (CQFW Levels 4 and 5). All Foundation Degrees must provide a platform for progression to an Honours Degree or range of Honours Degree options. This most often takes the form of a ‘top-up’ year which may be bespoke provision for Foundation Degree graduates or the final year (Level 6) of an existing Honours programme. Professional accreditation is increasingly important in many sectors. If HE achievement can be linked to the requirements of professional accreditation, that not only raises the status of the programme but also sets learners on a path of lifelong learning through Continuing Professional Development (CPD). The qualifications offered by many professional bodies any professional bodies are also recognised within the QCF, with higher level professional qualifications mapping across to postgraduate level (Level 7) study. The Learning Through Employment framework allows individuals already in employment to work towards a university-level qualification relevant to their specific area of work. Its main feature is that the majority of learning takes place through active and reflective engagement with work activities, underpinned by the appropriate academic knowledge and skills. Courses can be tailored around any subject and are negotiated between the learner, the university and the employer. Engagement with the framework requires a strong individual commitment to learning as well as appropriate opportunities to learn from the workplace. The learner, university tutor and employer work together to agree a programme of study that draws or builds on their work activities and, at the same time, satisfies the requirements for a university qualification at the appropriate level. The outcomes of the programme planning stage are recorded in a learning contract which, once approved by the university serves as a formal academic document like a course document. The learning contract may incorporate a claim for credit to be awarded for previous learning where it is relevant to the theme of the overall programme. In addition to the identification of learning and development in the workplace and programme planning, all programmes involve work-based projects, a research project and a module on reflection on learning in the workplace. Learners may also incorporate subject-specific modules, accredited in-house programmes or independent study modules into their individual programmes which is agreed at the programme planning stage.

A toolkit of support materials has been developed by the University’s Centre for Excellence in Learning and Teaching to provide practical advice, support and guidance on the Learning Through Employment Framework, with separate toolkits targeted towards learners, employers and lecturers. The employers toolkit is available via the university’s webpages, and in hard copy format. The learners’ toolkit is promoted on the University’s web pages, with support material available via Blackboard, the university’s Virtual Learning Environment (VLE). The learners’ toolkit support materials interface with the VLE via the University of Glamorgan’s own content management system (CMS) ‘GlamLearn’. The toolkit contains: Guidance on learning to learn with the toolkit and guidance on engaging with the CMS; guidance on the framework and credits; guidance on the accreditation of prior learning; guidance on preparing a learning contract; guidance on accessing the University’s facilities (many of which are available online); full support materials on how work-based learning can be assessed, including outlines of various methods of assessment, guidance on preparing a portfolio for assessment (with the integration of an e-portfolio tool within Blackboard to facilitate assessment and personal development planning), guidance on reflection and review, making presentations, and preparing work-based and research projects. This toolkit is also accessible by University staff involved in the support of these learners. The online learners’ toolkit offers a wealth of information including, for example, what courses are available, how assessment takes place, guidance on accreditation of prior experiential learning (APeL) and accreditation of prior certified learning (APCIL) and advice about research and learning styles. Lecturers’ toolkit materials also contain information on managing work-based learning programmes, supporting work-based learners, and assessing work-based learning.

III. CONCLUSION

The shell framework for Learning Through Employment incorporates a number of work-based learning modules in the standard sized 20 credit module offered at the University of Glamorgan, in addition to 60 credit work-based project modules offered at both Levels 6 and 7. These modules are designed to assist faculty colleagues less familiar with the accreditation process of informal work-based learning to incorporate such learning opportunities within both new and existing programmes.

By designing such a shell framework, the University has attempted to overcome the implementation problems often associated with embedding innovations in learning and teaching. The framework has the support of top management, and programme designers are encouraged to consider how to better embed work-based learning opportunities when proposing new programmes for validation. Sample module descriptors have been written for Levels 4-7, and can therefore be taken ‘off the shelf’ and incorporated within new programmes, or added to existing programmes via the annual review and minor amendment process.
The framework and toolkit enables the wider accreditation and embedding of work-based learning, which is deemed so important in facilitating the achievement of UK government targets for 40% of UK adults to gain a qualification at Level 4 or above in the next 10 years. The learners’ toolkit support materials are accessible via the University’s VLE, thus supporting the work-based learner with technology enhanced learning, a key feature of distance learning. In keeping with the concept of work based learning, no subject based content is delivered via this toolkit, rather it is the work-based element of the learning that is supported.

The University of Glamorgan’s approach, building on its reputation and experience at the forefront of UK developments in technology enhanced learning, recognises the specific characteristics that distinguish work-based from traditional campus-based learners, and those that distinguish work-based from other types of distance learner. This approach also helps meet the needs of employers by enabling employees to undertake learning that is relevant to the workplace. The learner also benefits from the opportunity to gain accreditation for the learning that takes place in the workplace, to gain a HE level qualification relevant to their work and which is fit for purpose to the contemporary workplace environment.

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