Extending the models for work-based learning into the lifeplace

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ABSTRACT: In the article, the authors discuss models for work-based learning (WBL) and how they can be extended to provide accreditation of learning achieved in lifeplaces such as the home, the community and the workplace. The shift from the traditional on-campus learning model to an off-campus negotiated learning model is critically reviewed in terms of suitable methodologies for lifeplace learning. A lifeplace model is considered in relation to validity of the workplace, home and community as functional learning environments. The results obtained from pilot testing of life-based learning modules within a broad-based degree are discussed and factors that appear to be important for the establishment of a lifeplace learning model are detailed. Conclusions support extending the work-based model in order to achieve a new paradigm of lifeplace learning.

INTRODUCTION AND BACKGROUND

UK education has recently been concerned with the shift from didactic lectures, rote learning, single discipline subject-centred teaching, explicit knowledge saturation and memory-based examinations, towards a new horizon involving student-centred and negotiated learning, the acceptance, development and use of tacit knowledge and its useful integration with explicit knowledge, knowledge-based skills, reflective practice, and the seeking of more realistic and effective methods of assessment. There appears to be a challenge to the archaic, out of date and, at best, moribund practice of on-campus learning as new learning modes and environments, such as work-based and workplace learning, become the new paradigms for 21st Century education. These new learning paradigms have had to evolve against a disparate collection of opponents across the education sector, including the government, as many academics and educational policy makers appear to be committed to uniting to defend the old order.

The *status quo*, closely followed by ignorance and elitism, appear to be the greatest inhibitors to useful change. While governments have progressed the development of widening participation and social inclusion, these developments are still based on traditional, on-campus, didactic systems with little or no formal recognition, by the policy-makers that are driving them, that they could be underpinned by considering the accreditation of informal learning achieved in people's lifeplaces, such as the home, the community and in voluntary organisations.

It has been suggested by Hills and Telford that the current crisis at the higher level of education is being driven by the exponential explosion of explicit knowledge, which has placed impossible demands on the traditional didactic system [1]. This flood of knowledge, and the confusion of academics in trying to cope with it, have now raised serious epistemological concerns for the future in terms of how to deal with, and manage it, in a rational way, with regards to undergraduate and postgraduate curricula.

Gibbons et al and Ziman have questioned the whole aspect of knowledge and categorise forms of knowledge into Modes 1 and 2 [2][3]. Mode 1 primarily describes factual explicit knowledge essentially providing description of the global collection of systematic codified knowledge in written format but, more recently, presented through some form of digital media, such as the World Wide Web and the Internet. The main problem with this form of knowledge is its sheer growth and fragmentation into greater and greater specialisations. Hence, the lecturer presented with an undergraduate curriculum increasingly faces the problem of what knowledge can be most effectively and usefully presented in a three/four year programme of study. As one might expect, this has led to many academics overloading the curriculum, which consequently destroys the motivation of the student. Chisholm reported this in respect of engineering disciplines where overloaded curriculum and de-motivated students led to significantly poor progression rates [4]. However, Mode 1 has a clear value in so far as essential explicit knowledge related to a given subject discipline can be clearly identified, but it appears to inhibit off-campus learning development, such as work-based systems and the proposed extension for the recognition of lifeplace learning. The authors suggest that Mode 1 leads to internal uniformity and external conformity, and this is well illustrated by the recent UK development of the rationalisation of the content of a degree discipline to conform to national standards.

Perhaps the greatest and most serious aspect is academic attitudes regarding knowledge and learning. Academics tend to believe that they have the knowledge to decide what students need – regardless of any educational or personal objectives of the students. They exhibit a form of academic elitism where they seem to believe that they – and they only – have the right to judge what candidates for a programme should learn; theory

prevails over practice in the on-campus approach. If it is accepted that education is there to improve the individual and the individual's contribution to society, then it is obvious that practice and theory need to form an intimate partnership where theory can drive practice, but also where practice can modify theory as reported by Checkland [5].

The fragmentation of knowledge is highly supported by Mode 1, but the authors suggest that this provides little or no support for problem solving in a real life environment. The new practices in the lifeplace, which, occur in real world, transdisciplinary environments, allow knowledge bases to interact and be understood together; this allows more significant learning for individuals and society. This Mode 2 off-campus practice, currently work-based, can support the growth of the new paradigm relating to the formalisation of life-based learning. It allows the contextualisation of knowledge and is driven by a holistic, rather than a reductionist approach, and, importantly, it is context rather than subject driven. Mode 2, work-based learning (WBL) models in organisational learning environments, are driven primarily by content and an integration of disciplines that permit divergent, not convergent, thinking, and support integrated learning and knowledge production in the work-based environment. It supports pushing forward leading edge practice that is often unacknowledged, rather than academic *blue skies* on-campus research.

Mode 2 also supports a key element of WBL in terms of advocating in-depth reflective analysis as a basis for learning. Over the past 12 years, modes of reflective analysis have developed rapidly, yielding a wealth of methodologies that underpin off-campus learning and the authors suggest that the same reflective practices can equally well support learning in the proposed lifeplace learning environments. Thus, essentially the Mode 2 considerations put forward by Gibbons and Ziman are about the WBL environments that can be used by all institutions outside the campus [2][3]. Mode 2 opens the door wider to skills, like personal skills, personality skills, intellectual skills, and professional and craft skills, and an examination of both the workplace and the lifeplace environments of everyday living quickly reveal them as ideal for such skills development. Within these environments, it is possible to acknowledge learning that involves a mixture of skills from intellectual to craft, from professional to personal. Chisholm discusses this aspect where he considered why work-based learning was a better model for engineers and related the skills attributes needed to the emotional intelligent needs of the graduate [6]. With Mode 2 describing the contextual nature of useful knowledge, it adequately underpins the theory of learning to be achieved in WBL environments where the basis of learning is through the contextualisation of the knowledge within the transdisciplinary environment.

It was recorded by Davis and Chisholm that Mode 2 also recognises the value of tacit knowledge, its role in WBL and its possible value in life-based learning [7]. It was shown that tacit knowledge is almost unique to Mode 2 learning, and since the proposed extension to life-based and lifeplace learning is also about off-campus learning, then tacit knowledge most probably has a significant role to play. Mode 2 makes the case for the need to extend learning outside academic institutions and achieve a range of WBL with the capability to support the needs of society. Mode 1 suffers from the problem of explicit knowledge, which becomes a hindrance to progress. With Mode 2 now well established as an alternative to the classic Mode 1, it provides a way forward for the consideration of its extension of the concept to lifeplace learning, suggested as Mode 3 [7][8].

THE DEVELOPMENT OF LIFEPLACE LEARNING

Globally, it appears that there is little or no awareness of a set of concepts that describe lifeplace learning. Extensive literature searches reveal no major studies relating to the formalisation of learning in the lifeplace. This is perhaps not surprising when it is considered that over the past 15 years, the growth of WBL has been very slow, the net result of a conservative and traditional set of global educational values supported by academic elitism that still believes that education is only possible within the confines of an on-campus environment. With much of the world following this traditional learning and teachers believing in autocratic control of what students learn, it is far from surprising that little has appeared in the explicit knowledge searches relating to life-based learning. Lifeplace learning represents learning that is derived from the motivation and interest of the learner and involves learning achieved through learner negotiation with the educator. Considering what was said earlier, it is obvious that such a system is totally contrary to the concepts of the Mode 1 approach.

We need to move towards the use of lifeplace learning for a number of reasons. Primarily, it will significantly extend adult learner education in a way that traditional on-campus learning will never achieve and will thus provide a radical positive shift in global life-long learning for society. It will also have a profound effect on social inclusion by widening the recognition of learning across society globally, thereby providing the formal recognition of learning for all groups of society, breaking the chains of academic elitism and underpinning the growth of better educated people who have been formally recognised for their contribution to world society. Education can conquer many of the problems facing society, but only if we are totally inclusive with the accreditation of learning in the lifeplaces of the peoples of the world. The nature of such learning is also much more relevant to supporting global growth and development, as lifeplace learning is integral to everyday living environments, and hence the blend of explicit and tacit knowledge, combined with knowledge-based skills, will complement and underpin global society alongside that achieved by conventional on-campus learning.

We are already witnessing a gradual but radical shift in the status of the traditional campus setting as the sole focus of learning. It should be understood that this goes beyond the current understanding of *distance learning* or workplace learning, where traditional teacher-led programmes are delivered in the community, home or workplaces. This, in itself, is simply an extension of the overall on-campus Mode 1 approach out into these environments and in no way relates to the concepts of Mode 3 lifeplace learning. The authors are concerned within this new paradigm to define the lifeplace environments, such as the home (family), the community and the workplaces themselves, as acceptable learning environments and sources of learning. The question that remains is in what way we can as modern educators capture, in a formal and acceptable way, these new learning opportunities?

THE STRUCTURE

The new learning environments need to be structured and systemised to enable them to be recognised alongside other accepted formal learning frameworks, such as Web-based and WBL. The basis of this suggestion is that these environments can be formalised using as a basis the models now accepted for WBL. The result will be the prospect of widening access and

social inclusion in a way that was not imagined possible. It is also suggested formal recognition, for the first time, of new forms of informal knowledge, which at present is lost to the educational system and society, such as learning from hobbies and life roles, such as motherhood.

The required quality assurance and assessment instruments need to be explored by building on approaches and practices that have become acceptable for WBL over the past decade. Increasingly in the UK, WBL is becoming accepted as a valid learning mode by tertiary education establishments and educational policy makers. Initially, WBL was not accepted as an educational system, but progressively it has grown on a global scale, particularly in the English-speaking world. The system where candidates negotiate a WBL agreement or module to achieve planned outcomes derived from experience of performing a work or job role in an organisation is well accepted. The core of the learning is experiential, but it is complemented by the directed use of relevant explicit knowledge set within the context of work and the integration of this explicit knowledge with tacit knowledge.

The agreement or module gives focus to the negotiated learning with appropriate assessment criteria and relevant assessment methodologies being built in. Although probably still novel in some parts of the world, WBL provides a practical and proven method of recognising learning that can and does take place outside formal campus-based environments. It forms the ideal starting place to model and develop lifeplace learning, which will most probably have to pass through similar growth stages before it becomes accepted alongside traditional on-campus learning. While lifeplace learning will still see the workplace as a focus for learning, the authors are interested in exploring learning that can be achieved through the use of the environment during evenings and weekends, and not necessarily associated with the required work role; this learning can arise from a person's life role in environments such as the community, the home and in voluntary environments. Acceptance of the work-based systems were conditional on educators being able to see that the systems had robust procedures, quality systems and evidence of the level and depth of study. It is anticipated that these aspects will be even more important in building a model for lifeplace learning where these environments are even more difficult to formalise than those of work-based.

The basis of our development is to pilot lifeplace learning, initially using the traditional on-campus approach to quality assurance and assessment. We developed and tested a working infrastructure using an existing broad-based degree where students negotiate the range of modules which they wish to study [8]. Life-based modules were validated and incorporated into the degree to facilitate pilot testing. In proceeding in this way it was accepted that separate studies would be required to find off-campus assurance systems and assessment systems which would satisfy academic requirements. The modules were designed to be set up as learning agreements containing goals, objectives, outcomes, assessment methods that would facilitate benchmarking to national quality levels.

While WBL has assisted the progression from on-campus learning to learning in the workplace, the authors have anticipated that the step to lifeplace environments will be a bigger one, but will offer even greater rewards to society. The end result will be evidence to all those in society who have not formally undertaken approved on-campus programmes that they have indeed been learning and are still learning throughout their lives. Experiences become important learning events and this recognition will encourage people to commit further to life-long learning. However, we live in societies that expect accredited learning as proof of learning, as illustrated by the degree (or equivalent) awarding system, which is global. Many people, therefore, will wish to have the formal recognition of learning similar to that given as an on-campus award and therein lies the challenge. If this everyday learning can be harnessed and accredited, and its level and depth be defined, proof will be provided that society is evolving globally as a truly all inclusive learning society. The lifeplace paradigm will provide learners who have not had or taken the opportunity to learn formally with increased confidence of their abilities, worth and skills. Of equal importance, it will provide proof to the existing academic community that there is educational value in lifeplace activities. This new paradigm may provide the learning as a source of attainment in itself, but clearer recognition of this form of learning would obviate the need for students to submit to APEL procedures for entry to an on-campus programme.

THE LIFEPLACE ENVIRONMENT

Adults live the majority of their lives in the life-based, transdisciplinary environments, which are described as the home, the community, the workplace and, indeed, the network social environment, yet currently learning is driven through traditional on-campus approaches. Apart from the impediments to change discussed earlier, research within academic communities of practice shows that the fundamental reason for this is that no formal system of accountability in terms of quality assurance and assessment has been put in place to facilitate the acceptance of the learning achieved in what is still regarded as a set of informal, non-academic, non-relevant environments. We live within the current practice of restricting learning to a few years within a tertiary on-campus environment where the lecturer decides what knowledge is useful to the student. The system of accrediting only some knowledge has, as a result, also ensured that people who have no formal qualifications feel less valuable than others and yet their knowledge base may be essential to society's well being, eg mothers. This is no longer acceptable in the 21st Century, and it is suggested that all adult learners should be involved in negotiating for recognition the learning that they wish to achieve, and that the education system needs to facilitate this concept of lifeplace learning and utilising lifeplace environments on the same basis and with the same quality of esteem as traditional on-campus learning. This would mean, for example, that a degree achieved through community-based learning would have equal status to that achieved on-campus through a formally validated programme.

Life-based learning would normally be ongoing in several places within the person's daily activities. In extending the models of WBL to the lifeplace, it is obvious that the lifeplace environments could be combined with those for WBL to provide a network of learning environments independent from the traditional on-campus ones. In developing the lifeplace learning, it must be remembered though that on-campus traditional learning still has a major role to play in educating society and an important contribution to modern learning. What must not happen though is that Mode 1 – or indeed Mode 2 – inhibits or prevents the development of Mode 3. Unfortunately, the on-campus model has been so strongly supported globally that Mode 2 environments have struggled to gain recognition and Mode 3 has simply not been recognised. Innovative developments have been ignored and good opportunities missed. A clear example has been the placement system allowing

students to gain experience in organisations as part of their on-campus programme. However, these placements were mainly regarded as giving a student experience and allowing them to mature. More often, no mention was made of any form of learning achieved and students were given no credit within their programme, even if periods of a year were involved. Over the last decade, a wind of change has led to students earning credit for placement study, yet academics have fought any further moves to off-campus learning, despite accepting the success of credit-measured placements. However, the placement environment has considerably helped many academics to take a more open view of off-campus learning.

It would appear then, that for lifeplace environments to be successful, the new paradigm raises a number of key issues that must be addressed, such as:

- It needs to be understood that the role of the educator will be significantly different from the on-campus teacher. The model will need facilitators, coaches and mentors, who are prepared to be innovative and creative in supporting student learning and assessment;
- In depth consideration will need to be given to how to sustain the unique flexibility of the model, while also striving to assure equality of standards;
- Each programme will require to be validated on an individual basis if the student is to negotiate his/her required learning and assessment; methods will require to be developed that reflect accurately this model of learning;
- There needs to be an in depth analysis of what processes, technologies and support mechanisms will assure that the model is successful and effective;
- There needs to be acceptable quality systems that will satisfy educators, employers, learners and the government; this means accepting that new systems will be needed as lifeplaces are quite different from the formal, controlled on-campus environments;
- Methodologies and strategies for teaching and learning will be required to change radically if the lifeplace model is to be successful;
- There needs to be optimised use of communication technologies to support the communities of lifeplace learners.

As can be observed, these issues reveal the fact that the lifeplace model is supporting a significant shift in pedagogical and didactical approaches to a new way of contextualised thinking in transdisciplinary environments that is much closer to real life than the traditional on-campus setting. In addition, the honorary degree system can be used as an example of where lifeplace learning is already acknowledged at the higher levels of academia. If those who have lifetime achievements can be awarded high level degrees for what they have learned in their lifetime from their experiences, then there is surely no argument that lifeplace learning is valuable and, therefore, could be accredited at lower levels too.

THE LIFEPLACE MODEL

The model uses the successful components of work-based models in so far as they can be considered relevant. The most common models operating for WBL are the use of learning agreements or using essentially empty shell modules that are negotiated via the learner, the university and the participating organisation or, alternatively, between the learner and the university. These agreements usually have goals, objectives, outcomes, assessment criteria and appropriate assessment methods. Modules use a similar approach, but are usually more about learning outcomes. Negotiation normally involves the work-based organisation agreeing to support the studies by supplying an industrial mentor to facilitate the student in the workplace. The models are normally built around a person's job role and the learning is derived through the delivery of the work and through reflective practice. Normally, the models involve directed or structured studies and work-based methodologies. This reflects a Mode 2 approach where the studies are expected to be coherent and integrated with WBL. In this respect, the required knowledge is pulled either as explicit, tacit or in combination and, essentially, the knowledge is integral to the contextualisation of the work-based study. So the proposed model for life-based learning can now be considered and decided whether the work-based models can be either directly extended to the lifeplace or whether they can simply form the basis for a lifeplace model.

If a learning outcomes approach is assumed, then the fundamental requirement would be that the outcomes to be achieved in life-based environments would require to be clearly specified using a Learning Agreement or module approach and essentially benchmark against the level descriptors related to the level of study being considered by the supervisors and the learner. There is no reason why a learner could not then be assessed against achieving the outcomes at the level specified. It would seem clear that this argument would be as valid for outcomes achieved in the lifeplace environment as for outcomes achieved through the work-based model.

Clearly, the lifeplace model may involve more complex learning environments as they may be less structured than a work-based environment. However, the home, workplace and community environments may well provide more innovative learning environments where learner motivation is higher, simply because the learner is not confined to a work-based study that is part of the job role requirement. Thus, the first significant point to consider is that lifeplace environments are not necessarily related to work, not even where a person uses a workplace environment to achieve learning. On this basis, lifeplace environments thus have the potential to offer an enriched learning experience providing, overall, a more effective learning model. There is little doubt that the general infrastructure used for WBL agreements or modules has transferability to the lifeplace. Certain aspects, such as learning goals, outcomes, objectives and assessment criteria, and assessment methods, will be as fundamental to life-based learning as they have been to the work-based models.

In the lifeplace, individuals will learn through an extended Mode 2 approach, Mode 3, by being involved in some form of study that leads to learning using reflective practice as a major part of the study methodology. The knowledge pull will be essential to lifeplace studies and, similar to the work-based models, involves knowledge contextualisation in terms of the learner's study project. The Mode 2 approach is probably more desirable for the lifeplace paradigm, as it supports a broader basis of learning that is a prime characteristic of the lifeplace being considered. It is important to remember that the lifeplace paradigm is not about replacing the traditional on-campus model of education for single discipline fields of study. The specialist disciplines will always be required to contribute in society and these may well be best taught traditionally, but also needed are Mode 2 and Mode 3 learners through work-based and the proposed lifeplace learning to enable all learning to be acknowledged and provide society with the future innovation that it needs.

A key transferable aspect within work-based models is the nature of the learning, which involves a range of interacting disciplines that have to be understood if problem solving and innovation is to become possible. Lifeplace environments offer the same potential learning challenge, but without the need to learn from a confined job role. The rigid nature of learning in the on-campus environment has been stated above; it was also shown how a work-based environment can produce much greater flexibility. Lifeplace environments offer even greater freedom and flexibility for learning when compared to the work-based models. The support systems for work-based models probably have direct transferability to the lifeplace model. The problem with the work-based models is that the support systems can significantly vary depending on how well a higher education establishment has understood the requirements for operating a work-based model effectively. Models are operating where supervisors/teachers are using a similar approach to that for on-campus learners. Generally, it is now accepted that this cannot lead to effective work-based learning.

Other situations exist where trained facilitators, mentors and coaches replace the traditional teacher approach and, in some cases, the WBL environment has industrial mentors and facilitators. While this is the current situation relating to work-based models, one needs to consider what is appropriate and what is possible in the lifeplace environments. The home lifeplace is unlikely to yield mentors or facilitators, but the on-campus supervision from an educational establishment could effectively provide a mentor or coach provided effective training has taken place. In the community environment, there is potential for similar support to that for a work-based environment. For example, a learner in a voluntary organisation may well be able to have an agreement involving staff of the organisation that could provide mentoring and facilitation after being trained. With a new emphasis on *life coaching* in education, this could provide the key support form needed for lifeplace learners. It provides a methodology to move individuals forward in achieving their goals, operating at a holistic level, and thus recognising that the lifeplace and workplace environments of the learners are interrelated. Thus, coaching has the potential to contribute both the essential tools and methodologies to work within the lifeplace and deliver more effective lifeplace learning than could ever be achieved using the traditional work-based support systems of simply mentors and facilitators.

The degree to which work-based models are supported by effective communication technologies tends to vary from institution to institution, but general feedback from published literature shows that effective communication technologies improve the quality and learning experience of work-based learners [6]. The question arises as to effectiveness as part of the lifeplace model. It is well understood that the availability of Web-based environments and online communications are set to revolutionise not only traditional on-campus learning, but to make off-campus work-based systems much more viable and effective. In particular, they can overcome the potential isolation of work-based learners and create a diverse community of work-based practice that operates transnationally or globally. Information and communication technologies (ICTS) have the potential to dramatically improve the delivery of WBL models. Apart from reducing isolation, ICTS can give highly enhanced peer interaction and reflective practice in a social context through collaborative tools and social learning across the community of practice.

While many of the approaches are well established in the on-campus modern approach, they have still to be effectively integrated and explored in relation to making work-based models more effective. While growth has been slow in relation to the work-based models, consideration of the lifeplace environments suggests that ICTS could provide an even more dramatic and effective underpinning to the learning. The potential isolation level of lifeplace learners could be more critical than the work-based learner who at least is operating within a working community of practice; therefore, the need for an effective community of practice is high if the lifeplace model is to be effective. The learner support service, previously identified as critical to the success of the lifeplace mode, needs to focus on the *cognitive*, *affective* and systemic components which are designed to provide structured support for learners' self direction and interaction via a continuum that comprises orientation, diagnostics, pre-assessment, learning orientation, advising and, of paramount importance, developing the attributes of emotional intelligence (EQi). This will allow learners to enhance their abilities to effectively develop and be successful in collaborative interaction. ICTs have the potential to assure that the lifeplace model is highly effective as a learning system and would need to be developed as an essential system to underpin the model.

ASSESSMENT AND QUALITY ASSURANCE

The assessment of WBL studies is complex, and while well established, is the subject of ongoing debate centred on the assessment protocols that have been developed and used to assess it. It is generally accepted that experiential learning, normally the focus of WBL, poses problems for assessment in being able to set appropriate assignments that adequately reflect the set outcomes. The debate has led to a range of published papers relating to assessment and the WBL network in the UK recently organised a conference and proceedings devoted to this [9].

The workplace environment, and the studies undertaken therein, is a nexus of a number of widely different objectives and varying cultural influences. The environment is designed for the organisations' to deliver work outcomes and not for academic study. Thus, it is not surprising that tensions arise concerning how to derive effective assessment of WBL and quality assure a resulting award. The lifeplace environments proposed pose a similar – but not identical – range of problems and tensions, although it could well be argued that the home environment may have less conflicting tensions. However, the problems of assessment methods and award verification still exist. As such, much of the analysis employed in studying the work-based environment will have a degree of transferability to the lifeplace environments.

The traditional approach of higher education – programmes on-campus where the student follows a set knowledge base prescribed by the academic staff followed by summative assessment to demonstrate mastery of the principles and theories in relation to a specific subject discipline – is hardly liable to be a supportive way forward for life-based studies in environments like the home and community. Workplaces and lifeplaces are much less ordered and, therefore, the learning takes place within environments that are much less controlled when compared to that on-campus. While lifeplace environments are similar to work-based in being transdisciplinary, they could still support single discipline approaches, eg the study of history, as the learner has a much greater choice in determining how to study. This is not the case with classic WBL where learners derive experiential learning from their job roles set by the organisation. In this respect,

lifeplace environments create a greater freedom of learning for prospective students but, at the same time, more flexible lifeplace environments create a greater challenge in terms of appropriate assessment and accreditation of awards for quality assurance and enhancement for measurement and standards.

Assessment in the workplace has to address *know how*, the learning associated with experiential developed knowledge and knowledge-based skills, which derive from the modification of explicit knowledge through practice. *Know what* essentially relates to the learning associated with explicit knowledge, and while higher education institutions have experience of assessing the *know what* approach, they have much less experience in dealing with *know how* and, consequently, less experience in how to quality assure and assess effectively. This argument can be partially transferred to lifeplace environments, where community and social environments will probably be based on *know how*, as will work based in voluntary organisations. However, in the home (family) environment, it is reasonable to assume that a prospective student could have the flexibility to concentrate studies on the *know what* areas similar to the on-campus approach. Yet while the approach would be similar, the process would be entirely different with the student negotiating the curriculum content and methodologies of study to suit his/her interests, motivations and lifeplace environment. In this respect, the more open and flexible approach would provide challenges in terms of assessment criteria, methods and quality assurance in addition to finding the most appropriate supervision support. If one considers quality assurance on-campus, it usually consists of the following approach:

- Each module comprising a programme is scrutinised and validated as having appropriate learning outcomes and content to reflect level and level descriptors;
- The programme of study will have been scrutinised as having appropriate benchmark standards and validated on a regular basis;
- Summative examinations will have been approved by an external examiner system and student papers scrutinised for appropriate allocation of marks;
- Examination boards/panels take progress and award decisions taking due regard of the University and programme validated procedures, and for awards approved by the external examiner system;
- Audit trails in place relating to organisation and teaching of the programme via a university set of procedures verified by a programme board panel.

This on-campus quality assurance approach has some relevance to the work-based environment, but it cannot be applied in the same process manner due to the involvement of the organisation in the specific practice-based interdisciplinary studies. This argument has transferability to the lifeplace environments that are even more open in terms of flexible learning and hence provide perhaps an even greater challenge. The way forward to having an acceptable system in the UK would make use of the Quality Assurance Agency (QAA) framework. This provides level descriptors that provide guidance on the range and depth of knowledge and skills to be achieved for each specific level of qualification, ranging from access through undergraduate to postgraduate awards. Each descriptor at a given level involves five components, namely:

- Knowledge and understanding;
- Practice: applied knowledge and understanding;
- General cognitive skills;
- Communication, ICT and numeracy skills;
- Autonomy, accountability and working with others.

Although there are no specific benchmark statements relating to WBL, the level descriptors can be applied and used to benchmark work-based studies by correlating learning to the components comprising the descriptor at a given level of study. As WBL can be described using learning goals, objectives, outcomes and assessment criteria, then it is possible to benchmark against the QAA framework and provide essential quality assurance of work-based programmes. The only problem is the fact that components of the descriptors, such as knowledge and understanding, the practice and communication, ICT and numeric skills, refer to a subject discipline, whereas WBL is based on interacting disciplines in a transdisciplinary environment. Yet there is no reason why generic outcomes at each level cannot take account of the interaction of subject disciplines in terms of interpretation and hence can be effectively used to accurately benchmark and quality assure. By analogy, all of this argument that applies to WBL has transferability to the lifeplace environments although, in some cases, the single disciplinary approach in the descriptors would have direct relevance, as it was shown earlier that the life-based environments can support both single discipline studies alongside transdisciplinary studies. Thus, the focus for achieving successful assessment for lifeplace learning would involve the following:

- Creating assessment criteria that focus around the generic learning outcomes benchmarked against an appropriate study level;
- Designing an equivalent role for the external examiner system to scrutinise the learning outcomes and assessment modes for lifeplace learning programmes;
- Creating suitable audit trails that relate on-campus to off-campus lifeplace environments to support quality assurance of lifeplace learning processes and assessment methods;
- Developing assessment modes that are appropriate to the nature of the learning objectives/outcomes and are sensitive to the nature of the learning environment.

The consideration must then be what forms of assessment modes are liable to provide sustainable measurement in the lifeplace environment? Obviously, some of the work-based modes should have transferability as both environments generally reflect the following:

- A significant shift in pedagogic approach compared to an on-campus;
- A significant shift in didactic forms of delivery;
- Much greater autonomous learning;
- Negotiated studies;
- Experience-driven learning.

Formative assessment modes have proven to be highly effective in WBL and formative assessment has been the subject of in-depth study by Black and Wiliam [10][11]. In their studies, it has been shown that formative assessment functions best where teaching and learning practises have been significantly changed. Both workplace and lifeplace learning have been provided as a focus for a complete redesign of teaching and learning and embedding formative assessment within the studies is also supported by the work-based community of practice. This should have direct transferability to lifeplace environments as the learning practices are mostly similar. So the assessment modes that will be most appropriate

will be those that support embedding formative assessment such that learners can reach the stage of undertaking their own formative assessment using novel modes. It is believed that this is fundamental to the successful establishment of life-based learning, and sustainable and effective assessment modes. Thus, an essential process within lifeplace learning, apart from the life-based study practices, will be the process of enabling learners to develop their abilities to devise schemes of formative assessment to support their own learning.

The importance of this lies in developing the learning and assessment practices in the way that they will become an innate part of the learner's learning how to learn skills regardless of what other requirements they have to satisfy. Thus, we are able to produce a life-based learner who can understand the values of self-assessment and how to make critical judgements about competence and explicit knowledge. The problem in achieving this is the need to have facilitators, mentors and coaches who really understand formative assessment and the value of formative assessment. It has been reported by Black and Wiliam that a major outcome of their review showed that formative assessment is not well understood by staff on-campus and is basically weak in practice [11]. To have effective formative processes for lifeplace learning, will involve specialised staff development such that the staff involved with lifeplace learning is capable of supporting both the learning and assessment practices. Lifeplace learning is about developing skilled and flexible learners, who, through this form of learning can move beyond the boundaries of what outcomes are to be achieved in the mix of lifeplace environments, to a situation where they have developed both a focus of learning how to learn, alongside learning how to assess and make self-judgements.

Both the workplace and lifeplace environments are seen as a desirable ideal that goes well beyond the learning achievements possible through on-campus processes of learning and traditional summative assessment modes. However, self-assessment has implications for how learning agreement programmes are designed for lifeplace learning. Boud, in a study of sustainable assessment, suggests that what is required is a new set of learning outcomes that are correlated to the development of students as effective self assessors [12]. Lifeplace learning will, therefore, need to include, as part of the learning outcomes, an approach to self-assessment that will enable the student to establish and set formative criteria, to make effective evaluations and judgements of own learning, and being able to give and receive feedback. Ultimately, this form of formative assessment needs to become summative to lead to certification and an award. A number of assessment instruments have been shown as successful for assessment of work-based learning. These include the following:

- Use of reflective academic reviews;
- Conducting professional reviews;
- Use of peer-based review;
- Oral discussion of achieved outcomes;
- Use of organisational professional reports;
- Reflection based on gaps in current knowledge;
- Reflection related to problem solving and project delivery;
- Reflection related to experiential prior experiences;
- Direct observation of process/artefacts in operation within an organisation;
- Portfolios of delivered outcomes;
- Learning journals/logs;
- Non-written assessments involving synchronous and asynchronous non-text-based presentations.

This list is not exhaustive but does indicate the range of successful instruments in operation for WBL.

Earlier in the article, reference was made to the underpinning provided by ICTS for WBL and with regard to assessment it can provide alternatives to writing assessments. Basiel et al examined non-written forms of assessment for WBL using digital imaging techniques [13]. Highlighted are the following:

- Learning journals by digital video/photographs;
- Real time video cam presentation of assignments;
- Videoconferencing in real time;
- Virtual time oral presentations for distance students in different time zones.

For lifeplace learning, these techniques can be considered alongside written forms of assessment that support the learner in achieving self-assessed and examiner-assessed formative assessment as an integral part of the learning.

LIFEPLACE MODEL EXAMPLES

While there are innumerable examples of how learners can take forward lifeplace learning, it is considered important to illustrate the lifeplace model with a few well defined examples that are illustrative rather than exhaustive.

Let us consider a learner involved in photography, which is developed across the lifeplace environments. Through an interest in the subject, the learner could build up an in depth knowledge of photography combined with an excellence in delivering art form photography that is accepted in international salons throughout the world. While the learner would have knowledge of what had been achieved, a point could be reached where the person may wish to be assessed and achieve a formally recognised award relating to the knowledge and expertise that has been achieved. This is an interesting example as it shows the potential for life learners to achieve success in a single discipline award as opposed to broad-based study.

If we now consider a learner involved with a voluntary organisation, such as the Royal Society for the Protection of Birds, it can be seen that it is possible for a person operating as a volunteer to build up a broad-based body of knowledge, both explicit and tacit, which, when combined with the development of a range of knowledge-based skills, could lead to an award. Again, the person would be learning in his/her community, environment and home environment, as well as in the voluntary services environment.

If we consider the home environment, it is possible for a potential learner to build an in depth package of knowledge relating to a large range of subject specific knowledge alongside developing a set of related knowledge-based skills. In the modern home environment, this knowledge could be developed through chosen and selected reading combined with the use of relevant material from television and/or through the use of video/DVD/CD. The Internet as an information/ knowledge source would give access to unlimited knowledge bases. The actual subject areas are endless and the home environment could thus provide the basis of learning to facilitate the person gaining an award equivalent to the

on-campus educational awards. Typical could be a person achieving an award for studying a period of history or for a person highly motivated by sport studying football, or for a person researching on global social attitudes in societies and providing a book as formal recognition.

Many individuals work periods of their lives in other parts of the world and, therefore, knowledge of language and culture often become either desirable or a key requirement. Lifeplace learning would thus make it possible for such a person to achieve an award that could potentially vary from an undergraduate level to a postgraduate level in a similar manner to a WBL contract framework as reported by Chisholm and Burns [14]. In this example, it can be seen how the lifeplace and work-based models can be combined. If the person was determined to achieve a high level knowledge of the language, history and culture of a country, the driving motivation would be the delivery of the desired outcomes through the lifeplace model. Alternatively, the person as part of his/her job requirement, may be expected to learn the language in the work-based situation, thus following the work-based model. However, this example more realistically illustrates the synergy of combining the use of the two models. The person would be in an ideal position to negotiate a learning agreement that would be made up of language goals and outcomes to be achieved in the lifeplace of the person. In this particular example, the lifeplace becomes a *real world* laboratory where for the most of each day, the individual is in a learning situation with regards to the language. By using directed and structured studies, the individual would be able to underpin the language with an in depth understanding of the history and culture. In this example, it is also possible to see how the on-campus study could be combined with the work-based and lifeplace models. Attending on-campus aspects, such as the structure of the language, could be studied in the traditional classroom style and the outcomes combined with the others to create an educational award.

CONCLUSIONS

It can be concluded from the analysis that WBL models have transferability to lifeplace environments, with some exceptions, and the novel paradigm of lifeplace learning offers major expansion of the formalisation of learning leading to a recognised higher education award. In addition, lifeplace learning environments provide the potential to considerably extend adult education, providing a radical positive shift in global life-long learning for society. The nature and content of lifeplace learning is integral to everyday living, and its development and operation in lifeplace environments will have a profound effect on social inclusion by providing the formalisation of informal learning across all sectors of society globally. It consequently integrates explicit and tacit knowledge, and knowledge-based skills in real transdisciplinary life environments.

Lifeplace and work-based learning provide valuable additional modes of learning to complement the conventional on-campus single discipline programmes. Its development will recognise formally, for the first time, forms of informal knowledge at present lost to the educational system and society. Synergistic learning can also be realised by having programmes based on a mix of work-based, lifeplace and conventional on-campus learning. Lifeplace learning requires a more significant shift in pedagogical and didactical approaches than WBL has, as the learning environments are less structured. However, the lifeplace model offers greater flexibility and freedom of learning than work-based models, since the latter are confined to learning from the job role in an organisation.

Lifeplace learning will only be successful if on-campus staff develop as mentors, facilitators and coaches as opposed to traditional supervisors. As lifeplace environments are less structured, rigorous assessment and quality assurance are needed to underpin the conversion of informal learning to gain a higher education award. The correlation of lifeplace programme outcomes to level descriptors within the UK QAA framework will facilitate the benchmarking of standards and rigour of study. Formative assessment modes, including self-formative assessment, are believed to be integral to a lifeplace learning system. Lifeplace programmes should facilitate outcomes that enable students to become effective in setting formative criteria, being able to make effective evaluations and judgements on their own learning and thus becoming effective self assessors.

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