

Learning to learn through real world inquiry in the virtual paradigm.

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Abstract:

Learning to learn or meta-learning is an increasingly prominent feature of higher education in the age of super-complexity (Barnett, 2000). This change runs in parallel to the emergence of the widening participation agenda. This paper explores how learners drawn into higher education from the workplace, rather than from traditional entry routes, can also embrace ways of learning to learn. It shows, through a case study based on the BA (Hons.) Learning Technology Research (BA LTR) course at Anglia Ruskin University, how a unique learning blend that combines online social learning, work-based learning, inquiry led learning, patchwork assessment (Winter, 2003) and high degrees of personalisation, can be used to facilitate meta-learning. Each element of the mix contributes to the learners developing capacity to become empowered learners with a capacity to design, control and reflect upon learning, and critically to re-learn in new contexts. Within this paper each element of the BA LTR learning blend is in turn considered for its contribution to this process. Online social learning is noted for its role in enabling learning to be the object of conversation. The work-based context for learning is shown to offer a rich and authentic range of scenarios to act as the object of reflection and the context for meta-learning. The reflection and inquiry based dimension of the blend is shown to lead to the establishment of frameworks for learning which act to equip learners with transferable skills. Through patchwork assessment learners steer away from traditional academic assignment formats towards more accessible, creative, enjoyable meta-learning focused alternatives. High degrees of personalisation in the learning blend makes learning the object of the learners focus. This paper explores the practices of the BA LTR and the role that these play in enabling work-based learners to involve fully in learning for super-complexity.

Introduction

This paper explores the ways in which meta-learning or learning to learn is enabled in the context of an online workbased degree programme, it makes relevant the need for this by examining why the need for learning to learn is important. Firstly then the paper explores the key concepts of learning to learn, supercomplexity and gives description of the BA Learning Technology Research (the course in which the case study is located). The paper then explores, how in a programme which actively seeks to open up higher education, the use of meta-learning may be used to enable and empower learners.

Meta-learning : The process of learning to learn

Meta-learning enables learners to have an awareness of their own learning and facilitates them taking control of the learning process (Biggs, 1985). It is a process, a product and an attitude (Jackson, 2004). Knowledge that is gained through meta-learning helps individuals to be effective learners, the meta-learning process is as unique to the individual learner as is the learning process (Jackson, 2003). Meta-learning may be distinguished from learning, since learning is “the process of creating knowledge by experience” whereas meta-learning is “the process of making sense of your experience of learning”. Through Carnell’s representations meta-learning may be seen as the process that governs and determines individual learning.

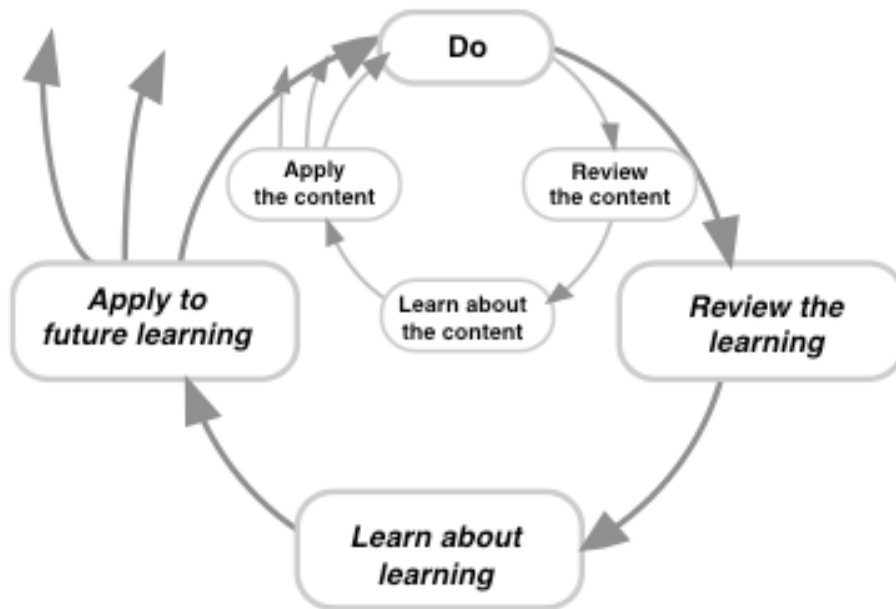


Figure 2. A meta-learning cycle

(Reproduced from Carnell, 2007)

Becoming a meta-learner results in learners becoming experts in learning. The expert learner, according to Ertmer & Newby (1996) takes conscious control of learning, planning and selecting strategies, monitoring the progress of learning, correcting errors, analyzing the effectiveness of learning strategies, and changing learning behaviors and strategies when necessary. In addition expert learners detect when they are not learning and seek out strategies to return to learning. By contrast Novice Learners do not stop to evaluate their comprehension and they don't examine the quality of their work or stop to make adjustments as they go along (Ertmer & Newby, 1996). Becoming a meta-learner is central to the journey from novice to expert learner.

Whilst meta-learning is not yet widely recognised in higher education (Jackson 2004) there is a growing interest in exploiting its benefits (Walker, 2004) especially since the Dearing Report (1997) stated that all higher education courses should include elements which teach learners how to learn. The term meta-learning is not instantly meaningful to all, including teaching staff in higher education. It is used interchangeably with the phrase 'learning to learn' since in effect meta-learning is indeed learning *about*, learning *for*, and learning *to* enable, learning.

Meta-learning is heavily intertwined with ideas of meta-cognition. This is deemed by Flavell (1987) as anything psychological which specifically includes the ability to monitor one's current state of learning (Brown et al. 1986). It can be viewed as *thinking about thinking*. Meta-cognition then overarches meta-learning. Flavell (ibid.) articulated that

meta-cognition, has three key elements in the process; firstly the individual and their self-awareness, secondly the task under consideration and thirdly the strategy employed to reach the learning goal. Strategies for meta-learning then may be seen to align self, task and strategy.

Tools and pedagogic practices have been articulated to facilitate the process of meta-learning. For example Moon (2002) advocates journal writing for its association with meta-cognition, seeing the journal as a vehicle to articulate issues in learning and to create a commentary of the learning journey.

Meta-learning is a form of learning useful to empower and enable learners but it may be seen to have particular importance in circumstances of change, unfamiliar situations and scenarios where existing knowledge is lacking or inappropriate. In situations of change, knowing how to learn is more important than the content knowledge (Ertmer & Newby, 1996). Walker (2000) emphasises this by explaining that some fields of knowledge are rapidly changing and thus require students to know how to learn so that they can keep up with the evolving body of knowledge in their field.

Super-complexity and the need to 'learn to learn'

A situation of *complexity* occurs as one is faced with an abundance of data whereas situation of *supercomplexity* is when one is also faced with multiple frameworks of understanding, of action, and of self-identity (Barnett, 2000). The emergence of supercomplexity in higher education is a product of the decline of universality. Barnett (2005) suggests that we need to accept that in a knowledge society, the knowledge in the university will fall short of the knowledge held in wider society since value systems of knowledge – notions of truth, openness and fairness are continually expanded and refined. The ways of describing the world as well as the world itself are then fluid.

For learning in this situation of fluidity Barnett suggests that the universities' role is to build in its learners "the capacity to cope, to prosper and to delight in a world in which there are no universals ... it is a task of – and a challenge to – the university to provide those capacities" (Barnett, p. 794, 2005). Whilst these ideas are explored conceptually in a growing body of work the translation to pragmatic reality for higher education practitioners remains less developed.

According to Fryer (2007) the complexity of the world around us and the changing nature of the world needs quite different forms of knowledge than in the past rational, ordered world. Fryer describes the need for learners that can handle change, loads of information and keep a competitive edge whilst also continuing to learn. In effect, learners must know how to learn (and re-learn). They must become competent knowledge handlers in an age Fryer refers to as the age of risk.

The necessity of work-based learning is more urgent with supercomplexity as individuals need to continually adapt for a changing labour market. Given the nature of the emerging society, it is the emerging belief that that such learning should equip and empower learners to deal with the world around them. The challenge for education is how to move from the rational order of provision of knowledge to empowering creative competent knowledge handlers for the new order. Delors believed the new learning need to have four key elements :

- Learning to Know (learning to learn, general knowledge & understanding)

- Learning to Do (skills, competence, practical ability in a variety of settings)
- Learning to Live Together (tolerance, mutual understanding, interdependence)
- Learning to Be (personal autonomy & responsibility, memory, aesthetics, ethics, communication & physical capacity).

Barnett (2006) echoing Delors suggests that much *more* than 'learning about' a particular subject is important, he suggests preparation for complexity as being central to higher education and particularly, preparation for the workplace.

Widening participation

Widening participation is a driving factor in the development and direction of Higher Education (Pugh et al, 2005). Current government policy seeks to ensure half of 18-30 year olds are in HE by 2010 whilst in the same time frame advancing fairness of access year on year (HEFCE, 2001). Though a broader aim "is to promote and provide the opportunity of successful participation in higher education to everyone who can benefit from it" (HEFCE, 2006). HEFCE particularly, and increasingly, recognises that, because of a demographic change (notably fewer young people in the labour market and an aging workforce), there is a need to provide HE throughout people's lives. The underpinning rationale for this expansion may be seen as a reaction to, or preparation for, the growth of the knowledge economy. Strategies to enable wider participation in HE have included the growth of work-based learning and e-learning, part time and distance learning (Cullen & Mills, 2006).

The BA Learning Technology Research degree at Anglia Ruskin University attempted to bring together two key influential concepts governing the shape of higher education in a synthesis of possibility.

Following the exploration of concepts, the remainder of the paper will explore, how in a programme which actively seeks to open higher education, the use of meta-learning may be used to enable and empower learners in the age of super-complexity, to build through meta-learning the capacity to delight and thrive in supercomplexity.

The case study context: BA Learning Technology Research

The BA (Honours) Learning, Technology and Research fully online degree was launched in 2003 and is part of the Ultraversity research project based at Ultralab, the research, education and technology unit of Anglia Ruskin University, Chelmsford. In 2007 the programme was integrated into the Faculty of Education, within the same institution, as it reached maturity with the graduation of its first cohorts and the completion of a full iteration of the pathway. In July 2006 approximately one hundred and fifty individuals graduated from the programme, and in January 2007 a further thirty completed their degree, around seventy more under-graduates are due to reach their degree's at the end of 2007. The Ultraversity project was set up to explore a new blend of learning which sought to widen access to Higher Education and to enable a creative approach to learning. Researchers undertake a degree pathway that is inherently personalised; a generic degree structure with built-in mechanisms for individual learners to adapt the degree to their own context (work based) and shape their own research agenda.

On the pathway, the students are called *researchers* as the course is centred upon individual professionally based research rather than traditionally delivered content. Each researcher negotiates and personalises the study undertaken, applying modules to their own context. Learners come from a range of professional contexts (including education,

health services, commerce and the self-employed sector) therefore each individual's research and research-context is different.

The BALTR is underpinned by a fundamentally constructivist philosophy of learning though more accurately it may be seen to be co-constructivist in its model of learning. This is constructivist, with the learner's creation and conception of knowledge at the centre, but with an additional emphasis on dialogue and a shared collective responsibility for learning. The emphasis for learning shifts from individuals to the community of learners, thus encouraging effective learning, activity, collaboration, responsibility and meta-learning (Watkins et al. 2002). The BA LTR is a fully online work-based degree and is underpinned by a collaborative community of inquiry. The community provides an online place for interaction and dialogue and it gives access to researchers for engagement with learning facilitators.

The case study seeks to act as a narrative and has been informed by a variety of methods including practitioner observation, analysis of text based dialogue and instigated online discussion (virtual focus group simulation). It also draws upon the experience of one researcher charted longitudinally over her three year learning journey, to give a unique insight of the case across the learning journey. The data illustrating the case is synthesised from these sources to tell the story of how the BA LTR enables meta-learning.

Online social learning

The BA LTR has technology enabled social learning at the heart of its design. The online nature of the programme means that the learner experience is routed in an online community located mainly in a virtual learning environment (VLE): this is a facilitated area. The overwhelming majority of discussion, conversation and exchanges occur in the VLE. However in the multifaceted online world there are also other channels for discussion and exchange, for example through "Skype"(VoIP) or through web log comments, these are deemed extensions of the community and are also actively encouraged . The group of learners does not simply become a community by chance, but rather by design and through the building of trust. Conversations are planned and instigated, seeded and modelled as part of the course design, as well as through immediate need and spontaneous discussion.

Emphasis is placed on dialogue as a vehicle for learning, in the programme design, and also through the assessment criteria, such that the process is rewarded as well as valued in its own right. Learners have the opportunity to demonstrate, within each and every module, evidence of learning through communication and community. This is not a measure or count of contribution, but rather it is rather a consideration of the recognisable gains that individuals have made through social learning.

Learners on the course are all undertaking individual research and therefore the common ground for discussion does not lie in talking about what has been learned directly through research and inquiry, (for example what has been learned about behaviour management or about the development of systems for improved business administration.) Instead the common ground is in a collective consideration of the nature of the task, a collective verbal processes of aligning individual contexts with the task requirements, and later in discussions, about the process of learning that has been undertaken. In effect the shared experience of the community lies in dialogue about the learning process, *a focus on learning about learning*.

The online element of the community encourages dialogue to be asynchronous. This allows contributions to be steeped in greater levels of reflection than perhaps would be possible in a face-to-face environment. Moreover the community provides an environment in which learners can articulate and adapt their views and understandings, in effect re-learning and adopting transient value systems. This process is articulated in a learners own words:

The community gave me an opportunity to debate ideas with other people, by this method you have to learn to express your opinions in a balanced way, to see what others are saying and if necessary to moderate or define your views.

Researcher J. Online discussion

Focusing on researcher L, in year one of the course informed by the community's feedback researcher L could amend and improve her course based work, the process was empowering and gave her a degree of independence from her facilitator. Using the community's feedback L's awareness of her own learning was heightened. Comparing this to the face to face process she noted that the peer review would be less prevalent because of the synchronous nature of the situation compared to the asynchronous online situation, wherein peer researchers have time to be considered in their reviews, in effect, delving deeper. In year three researcher L reiterated the focus on learning which has remained through her journey, in her third year saying:

I also feel that being in the community I am more focussed on the discussion. In a common room after a lecture I can't remember many students reflecting on the content - the emphasis was definitely on home, pub or what was happening in everyone else social lives.

Learners rarely talk of the learning community without using words including "support" or "trust". The overwhelming majority of learners felt that the relationships and conditions of honesty in dialogue were critical for real learning to occur. The community space may be seen for some as a place to build confidence to learn and especially amongst a course population who are study returnees. The place of the community space in this is articulated here:

Returning to study after 40 years plus I drew great support and knowledge from the community especially the peer support. It was great to discuss ideas and concerns and realise that I wasn't as stupid as I thought and that I was able to contribute to discussions instead of sitting on the fence.

Researcher C

Whether or not the same confidence to learn would be possible or possible at the same stage in other learning environments but it clear here that the community enabled by technology is critical for support and confidence for learning.

Whilst the benefits of community are vast there are of course issues and challenges too. The sheer manageability of messaging in a community can be difficult and a sense of not keeping up or offering to discussions may have some negative impact on learner confidence but equally strategies were employed to help manageability "partnering up with just one or two people in the final year was a big stress saver" (researcher J).

Indeed it may be said that such strategies could represent coping strategies for complexity.

The technology underpinning the community and central to the programme was also a challenge for many, it provides often the first hurdle to successful learning on the programme. Though learning to cope in the unfamiliar online world, there are benefits for learning how to learn, meeting the challenge develops not just technical skills but deeper underlying characteristics, coping strategies and confidence for learning in new situations.

“The degree taught me to operate in a completely alien environment in terms of technology ...it taught me to learn entirely outside my familiar comfort zones. It taught me to rely more confidently on myself”.

Researcher S

Work based context

Unlike in more traditional problem based learning, with the BA LTR, learners are in work, and thus select their own topics or areas of the practice to research and improve. For these work-based learners, the areas of inquiry are learner defined and not University-presented. In this way the learner has to align their own learning needs with the expectations of the course and also the needs of their workplace organization. These skills of learning design and choice, force learners to critically consider what they need to learn, how they will learn it, and why it is important both to them and their organisation. In planning, learners need to consider the process of learning. This is exemplified through the presence of learning outcomes and tasks that explicitly require the articulation of real work-based learning needs.

The issues under investigation within the workplace are often familiar to the learners in their day-to-day life, but by using rigorous methods of research, the learners re-examine the issues using different eyes - those of a research practitioner. Researchers make sense of their real world ‘messy issues’ for real improvement. In Barnett’s (2005) terms the learner becomes a ‘stranger’ to the world around them and using the value structure of the methodology of approach coupled with elements of self, new learning is undertaken. In this way the work place setting is the laboratory for learning, where the employee assumes and learns to assume, new perspectives on learning, in keeping with the nature of a supercomplex environment.

The real world nature of the context means real things happen to change the situation as the learner is investigating. In this way learners gain confidence in managing their learning in situations of change. Say when employment conditions change, learners have to take what they know about learning and apply it to a different situation, for example, learner C moved from employment in a teaching role to an administrative role He was able to continue to learn using the newly acquired strategies about learning and was not thus dependent upon an existing content knowledge base for success.

Through inquiries that work towards improving practice, real impact is evident in students workplace organisations. This is real world research and not a scenario. The stakes are high and the learning authentic, as these researchers illustrated in testimony.

“The impact of my Action Enquiry research, especially in this final year, has not only had the impact of the children reading more than previously, but also has helped my school in our very recent OFSTED; the work that I carried out was recognised by the Inspector.”

Researcher M

“These changes in governing variables will result in more effective working practices in the area of data backup and storage and a change in training policies at departmental level see. Whilst reflecting on the change in training policies I decided to involve all members of the department in the process. The end result was an agreement for change across the board and the discussion of other elements of practices that the team would like reviewed. Both these are positive outcomes brought about by the action of double loop reflection”

Researcher N

Clearly in these examples the motivation to become an expert learner is rooted in the desire to be an effective practitioner. This was a widespread phenomenon. The two elements of the learner in this learning blend are inseparable. The authentic learning context gives a complex environment to make choices about learning, an environment prone to change, which is the real world, and it also gives learners a genuine connection to the content of their learning, that adds reality, necessity and authentic association.

The authenticity of the learning context may be seen as accelerating the process of allowing learners to link the theoretical and practical worlds. Whilst the university according to Barnett (2005) struggles to keep up with the ever-changing real world, the research based course equips learners to make sense of and operate within the real world through their own negotiation of meaning and alignment of theory and world.

When I completed my HND in computing I attained a degree level knowledge and understanding of a wide variety of aspects of computing but left with a distinct inability to practically apply any of it to the real world. I would undoubtedly have had to take an 'apprenticeship' or workplace training equivalent in whichever specialisation I would have chosen to pursue to learn the practical application within a specific workplace role. At that time, my husband, who had only a long gained hobbyist's practical knowledge, was more capable of day to day tasks than I, the qualified one, was. By personalising our research we were able to apply the theory we had been learning within a practical environment. We were given first hand experience of how it works and how to make it work in the way we wanted. To me, this served to eliminate the need for the apprenticeship part of any subsequent employment. I felt much more confident in my abilities as a result of this and feel we all left as much more 'work ready' graduates.

Researcher G (recent graduate)

The pathway to learning and researching independently in a workplace environment does pose difficulties and tensions too. For example when the research topic is not agreeable to the university or the employer the researcher is thrown in to a situation of alignment that can be tumultuous and trying. The process of alignment though between individual, institution and employer though brings to the fore the learning process,

learners look beyond the surface, beyond what they want to learn but what is useful, valuable and viable. In effect the alignment of needs and desires works to give deeper understanding about the learning process and the place of knowledge in context.

Reflection & Inquiry

The BA LTR involves learners undertaking research and systematic reflection upon situations within their work in order to evoke learning. The course also encourages reflection about the learning process itself. There are modules where reflection is the explicit focus of study, developing skills, in and knowledge of, reflection. In effect, modules which specifically seek to develop learners as reflective practitioners. In addition all modules contain a reflective element whereby learners are required to consider their learning and how the strategies employed for learning may be developed in the light of their considerations. The learners learn about reflection in both their work-practice (content or incident reflection) and in their learning practice, reflecting on learning. Through both processes learners learn to reflect. There was an overwhelming sense in online discussions that the reflection modules had assisted learners to learn across different circumstances, that the skills were transferable to enable learning in a range of contexts as is articulated in these vignettes below. Moreover it may be seen to have given legitimacy and acceptance for self criticality and re-learning.

sometimes a bell goes off in my non-work life which says "critical incident" and makes me stop and think about what happened more deeply

Researcher S

reflection models ha[ve] made reflection in all aspects of my life much more focused and structured. I can now stand back away from the problem and critically evaluate the situation, looking at possible flaws and how to deal with them.

Researcher L

Quite simply I found learning about reflection was revolutionary. It has had a huge impact on my everyday life and I see tangible differences in the way I react to situations as a result.

Researcher LA

it has given me the key to think critically and look at strengths and weaknesses of self or system objectively, in an ordered fashion, without any stigma being attached to shortcomings.

Researcher T

Here two researchers articulate the value of the end of module reflection. These extracts reflect others in the sense of importance given to using reflection on modules to increase the understanding of self and the awareness learners have about the processes undertaken and critically the place of this review and reflection in concretizing plans for improvement in the way that learners learn.

If I was not reflecting at the end of a module it would be a bit like doing a science experiment at school you go through the apparatus, method and results then just hand it in. No conclusion! Why it happened? how it happened? could it have been done differently? what next? The reflection for me has often led to a further inquiry for research - so without it I would not have moved on much

Researcher P

It helps to clarify the key elements of learning within each module and how that learning was gained and can be applied to the work situation. This type of reflection can give a much clearer picture of the type of learner you are and this helps us to get the most from our studies.

Researcher LA

Building the learners capacity to reflect through the explicit exploration of techniques of reflection, coupled with the building in to modules the need to reflect on learning, allows learners to gain confidence in reflection. Reflection is then promoted in two distinct and mutually reinforcing ways. An additional benefit of the reflection upon learning built in to all modules appeared to be the sense of celebration of learning that the consolidation and reflection process allowed. In reflecting upon the learning process learners could take confidence from the positive elements of their review and indeed see their 'graduateness' unfolding. This appeared to be particularly beneficial for learners who admitted under-confidence.

As well as developing reflective processes, within the programme, researchers plan, undertake and reflect upon numerous pieces of research (mainly action research). The action inquiry dominated approach means simplistically that individuals take actions (planned) within their work context and evaluate these using rigorous research approaches with a view to making a positive impact. Deciding upon action research requires the synchronisation of present personal learning goals, workplace needs and also research standards. The learners, in undertaking action inquiry, align these different elements and value sets. Often this means playing out the tensions of conflict between, for example, personal learning goals, and the needs for improvement in the workplace. This involved process requires deep consideration of what is to be learned, how it can be learnt and why it is relevant.

Patchwork

'Patchwork Text' is a concept conceived by Richard Winter while Professor of Education at Anglia Ruskin. Winter's (1999) patchwork text approach allows different forms of writing to be assembled in order to discover the associations between various perspectives. The collected pieces of work are then shared among learners, discussed and interpreted in different ways, then stitched together, accompanied by a vital reflective and retrospective commentary, to collectively form the assessment piece. Winter's approach was adapted for the online environment by the course team and extended beyond text to encompass different media as well, enabling students to embrace the creative potential of online technologies, and transforming the patchwork text approach into one of 'patchwork media' (McGuire et al, 2006).

Critically the retrospective commentary was seen as a vehicle for reflection; reflection on what has been learnt, how it has been learnt and what strategies could be employed to develop learning in future. The patchwork approach puts the individual into the learning process rather than the content. The retrospective commentary or 'stitching' is a place where it is appropriate, legitimate and customary to explore the experience of learning.

The value of this is captured here by two researchers' own experiences of producing a retrospective commentary. Importantly "weakness" and "dismissed" information are valued as objects for consideration in the learning process rather than hidden from view thus allowing an honest consideration of learning, a process encouraged for the outset of the pathway.

"I'm also guilty of trying to show I've "mastered" the learning when I present docs and find it really hard to expose my weaknesses during the learning process. I suspect that none of us like to expose our weaknesses to others particularly when we're being judged but the point of the patchwork is to show that we found ways around them and that we learnt from the experience and continue to learn with it."

Researcher Y

"I welcome the opportunity (Retrospective Commentary) to explain just how I got to a particular point and why I dismissed other information, (all of which has taken precious time to find) over the information kept in the final piece of work. .. It also allows you to state the knowledge that you have gained while going off at a tangent"

Researcher V

Within the retrospective commentary a focus on strengths and weaknesses is required: this is also reinforced through the assessment criteria. Through this built-in feature of the programme researcher 'L' undertook reflection-upon-self and made informed decisions about positive change, a form of self-determination. In looking at her strengths and weaknesses, 'L' was able to set herself new targets for development, setting new targets helped her to take control of her own development.

Whilst the patchwork approach is facilitative of reflections on learning, and planning for future learning, it may be seen to be enjoyable, creative and accessible, especially when combined with the attraction of media-play, whereby the patches of the assessment product are welcomed in any media form. The learner endorsement of this approach by researchers is reflected in learning community discussion extracts about the patchwork approach.

Yes I do like this style of learning as I feel it stretches me and encourages me to attempt media I would have avoided in the past. Without this encouragement I would never have tried audio or video as part of an assignment. I think the patchwork approach needs organisation, time management and more imagination than normal but I have enjoyed attempting this in the Modules.

Learner A

Through dialogue with the undergraduates on the BA LTR, the patchwork approach needed to be clearly explained, discussed and conceptually mapped, if learners were to benefit from the process, rather than to face confusion. Where researchers expressed a lack of understanding about the process their appreciation of its benefit was much less, reinforcing the need to be explicit about the purpose of this approach to the learners undertaking it.

“For me, clearer guidance on what the expectation is from the stitching exercise would help me understand why the patchwork approach was being done and how all the patches fit together to make an overall piece”.

Learner C

This emerging knowledge of the approach has led to the course team providing a skills development workshop in understanding and working with and through patchwork text. An example of where learning about the learning process leads to fruitful learning.

Two additional benefits of the patchwork approach with regard to learning to learn can be seen. Firstly it is seen to have a motivating effect through its role in consolidating learning, in making clear and visible what has been learnt, rather than simply what is known. Secondly the use of multimedia and playful and experimental genres means that learners felt that they could get to know themselves as learners – what types of learning work best for them in different circumstances.

Personalisation

The BA LTR seeks to enable learner-choice this is fundamental to its design, in a scalable work-based degree for eclectic individuals of varying professional background. The place of learner-choice is paradoxically the glue that binds the course together. Within very broad course parameters, learners make choices about their learning; what their areas of research will be (course content decisions), what methods of research will be used, what the pace of study within modules will be, what media can be used to present data, who their audience will be, and in some modules, what activities will be undertaken to meet the learning outcomes. Placing the learner at the centre and devolving control of the learning experience, is central to the course.

Through these avenues of learner-choice, learners are obligated to explicitly consider the process of their learning. Learners need to consider and plan for their own learning, reviewing their starting point by examining where they are at, considering the process possibilities, (the module requirements) as well as designing milestones or learning goals to be fulfilled. This process is not imposed, but is gradually introduced with scaffolding, such that, in the early stages of a learning journey, learners have a detailed map upon which they can develop their plans. In late modules learners take a higher degree of control.

This is still new to me as I undertake my first ILM proposal but it does force you to think about what you want to know, what interests you and where your boundaries currently lie and need to be pushed to.

Researcher T

The ability to personalise learning to such a significant extent had a great impact on the learners enjoyment of learning because the increased relevance of the programme. The motivation and enjoyment resulting from this helps create a learning culture, a community of people wanting to learn.

Personalising our research also made it more enjoyable to carry out as it was relevant!
... learners attain better results when partaking in things they are enjoying and wanting to do.

Researcher S

The degree has confirmed I like to learn things that I want to know how to do and therefore study, which is not tailored completely to me or not as practical as I would like, makes me very irritated/stressed/ticking box mode at times.

Researcher G

Additional Discussion

The case of the BA Learning Technology Research degree has shown ways in which learning about learning can be embedded into programmes. In collecting data to underpin the story it became apparent, incidentally, but significantly that learners on the course have a very clear idea of what it is to learn how to learn and why this is important particularly with respect of the status of gradueness and the reality of a highly complex and changing world, particularly notable and not prominent in the literature on learning to learn was the perception of the need to develop personal socio-emotional skills to become a better learner :

By using a variety of pre acquired skills and developing new skills a learner identifies their preferred way of learning but also works at improving those areas that need developing. By doing this it is hoped that their visual, kinethitec and auditory learning styles are challenged. Using emotional intelligence (intra and interpersonal skills) provides a set of qualities that promote success - ie optimism, persistence, empathy, self awareness, goals for life. We become good learners by having a willingness to working at it!!!!

Researcher W

we have to meet certain goals but I see Graduateness as not only the acquisition of academic knowledge, but also the transferable skills we can take to the employment marketplace

Researcher LA

it is not just the piece of paper which claims I have passed my degree, it is the added 'extra bits' experienced through my passage of learning. These 'extra bits' will steer my life on a different course as my thought processes take into account the last three years learning. The experiences I have gained will provide me with the confidence, self esteem, knowledge, voice and language to equip me for the forthcoming years. My opinions and ideas will be based on knowledge already gained and also the excitement in learning something new.

Researcher P

Whilst Jackson (2004) suggested meta-learning is not yet widely recognized in higher education, the learners who have been exposed to a course abundant in meta-learning, show that there is both an appetite and the potential to exploit its benefits. These undergraduates reflect learners who have an appreciation of different knowledge systems; learning to know, learning to do, learning to live together and learning to be.

Through the BA LTR case study it is clear that dialogue transforms learning. “There is a sense of learning together by talking about their learning, engaging in co-constructivist dialogue, focusing on learning about learning” (Carnell, p. 37, 2007). The online learning community then provides a place for dialogue and facilitation assists this. A content heterogeneous- as opposed to content homogenous- community elevates the discussion from content to meta-learning by the nature of interaction, and the need for common ground. The asynchronous nature of the community, enabled by the technology, was also seen as potentially enabling.

Alignment was a recurring theme in the narrative, whereby, to understand and develop their learning meaningfully individuals had to consider multiple factors. Returning to Flavell’s (1987) conceptualisation of metacognition which returned three factors in monitoring one’s state of learning, it would appear as if the BA Learning Technology Research programme has captured quite explicitly that meta-learning does involve the alignment of *individual, task and learning goal*. In this particular instance – in a workplace environment – an additional ingredient in the process may be organisational needs.

Another recurring theme has been the need to scaffold learners and not expect them to know how to learn about learning. Learners do not innately know how to consider their learning goal, but rather need to be guided and nurtured to be, later empowered to undertake independent meta-learning. The need to nurture for empowerment is, it is tentatively suggested, more visible, when learners return to education through the less traditional pathways.

Conclusion

To become learners who know how to learn, we need to be able to, and have the confidence to, apply everything that we have just explored ... Some other courses offer rote learning, but I feel that the activities we use, although unfamiliar, challenging and frightening at the onset, become a cause for pride and build confidence and self-esteem. You can see where you started; where you are going and what you have achieved. It is IMHO a far better way to learn.
Researcher WB

In a fluid world through a range of techniques, Universities can employ blends of learning which prepare learners for the information-rich, value-changing world. The BA Learning Technology Research programme case study seeks to showcase some possibility, to share the unique blend used, and to seed the debate on how and why it is important to address meta-learning in course design and in pedagogies. This paper did not set out to provide a robust model of how meta-learning should be done but sought to add a contribution to the dialogue on how it *may* be done.

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