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Co-curriculum Design in a Conceptual Age: Engaging Students in the Landscapes of Learning

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Abstract: The current social and economic uncertainties have posed particular challenges for students and lecturers in contemporary Higher Education (HE). Academics and students in universities have responded to the challenges by reconceptualising what learning and teaching encompasses in the twenty-first century. This study proffers an interdisciplinary solution through the development of a new methodology: journey-mapping in the Landscapes of Learning (J-MapLL). This empirical study analyses the multi-modal methodology through three case study groups and demonstrates its efficacy in unfolding thinking through individual journey-maps and collective 'big picture' maps in the Landscapes of Learning that are personal and professional, within a given context.

1.   Introduction

HE in the contemporary period functions within a complex and often challenging environment. The changed educational landscape is partly as a consequence of external drivers, including operating within a competitive global market and a neo-liberal policy context and to internal drivers, such as, shifts in thinking about the nature of teaching and learning, in the twenty-first century. This landscape also reflects changes in the composition of the student body, which has changed as a consequence of new technology; the massification of HE and widening participation. Educators in HE have been responsive to the needs of the diverse learners they work with and the curriculum has subtly shifted from one that is focused on content (the what) to one with an emphasises on processes (the how, why, who and when).

Curricula, then, need to address this student diversity and, be framed to embrace both local and international students, in a manner that is equitable. A highly diverse student body requires a curriculum that is 'transformative' and one that 'develops dispositions, skills and other capabilities which enable graduates to challenge culture-bound knowledge and to produce new knowledge in a global context' (Appadurai, 2001, cited in Caruana, 2013: 11). This 'internationalised curriculum' (ibid) sits comfortably within the 5-16 yr old curriculum implemented in Scotland, the Curriculum for Excellence (CfE), especially the senior phase which has implications for HE. The Scottish Qualification Authority (SQA), states that from 2014, HEs will notice significant changes in 'the new kind of learner' emerging from school to HE; notably, greater maturity and readiness for HE (SQA, 2013). This curriculum change focusses on, 'the development of knowledge and understanding of key concepts', while the new qualifications framework aims to create a diverse curriculum 'meeting the needs of each learner' (SQA, 2013). There will be a greater emphasis on skills; defined as 'higher order (critical) thinking skills, creativity, innovation, research, investigation, extended essay writing and independent study' (ibid), in keeping with Scotland's educational heritage. Many in HE, are now considering how to connect the 'four competencies' expressed in CfE to concepts of 'graduate attributes', as there appears to be crossover.

It is within this context that the seeds of this empirical study were sown and initial ideas have now germinated in the creation of a new methodology that facilitates teacher-student co-

curriculum design: Journey Mapping in the Landscapes of Learning (J-MapLL) (Kingsley and Normand, 2013). Scottish education at all levels and in all sectors, favours a 'generalist' tradition, with a curriculum that is broad and interdisciplinary rather than narrow and subject specific (Davie, 1961). Drawing on this cultural tradition, the authors of this paper have used the breadth of the interdisciplinary lenses of Design and Education to illuminate what teaching and learning is in the twenty-first century. Further, the methodology has been developed as an insight tool that enables the unfolding of 'thinking' and deep learning in participants. This has resulted in the development of a methodology that is not only consonant with the Scottish tradition (Normand, 2010 unpublished) but, significantly, is applicable in any cultural context. The J-MapLL methodology has at its core engagement and participation and the potential for co-curriculum design

2. Co-curriculum Design

> We talk to them and engage them because it is their ideas, ways of seeing
> and being, that are their higher education (Peters, 2013:10)

Developing frameworks to co-design the curriculum with students through consultation, conversation and engagement is essential in HE, in the twenty-first century (Kingsley, 2009; 2011). Getting to grips with what student engagement really means is what Peters (2013) believes to be important for universities; conversations with students shouldn't be presented as novel, valuable or optional extras, but as fundamental. Angelo's, (2013) Designing curriculum focuses on three learner-centred approaches: Learning Outcomes, Grading Standards and Assessment tasks. These features emphasise outcomes and, while we consider a focus on outcomes to be relevant, our J-MapLL approach accentuates the processes inherent in curricula, and how these are illuminated through reflection and by applying the lens of another discipline; in this instance between Design and Education. Dubberly and Pangaro (2009: 4) state that 'Conversation is the means by which existing knowledge is conveyed and new knowledge is generated.' Effective conversation can be modelled to improve dialogue between students and staff in HE, to develop trust, establish relationships and for learning to take place. The 'conversation' is a means to convey concepts and to confirm agreement and when this brings about changes in a participant; we may say that learning has occurred. Our J-MapLL approach utilises multi-modal literacies allowing for conversations to happen through social media, small and large group activities, video critique and the drawing of signs and symbols.

3. Using the Lens of Design Thinking

As a discipline, Design is often misunderstood. Perhaps this is because in the contemporary world it is seen as diverse and fragmented; however, it is a shape shifter. Its inherent convivial nature can belie its purpose to improve lives. The meaning of design originates in the Latin word designare, de = out; signare = a mark, a sign; to mark out, devise, choose, designate. One concise definition of design is: to make or draw plans for something. Therefore, the educational Design lens, within this project uses drawing as thinking for its central purpose, to plot, mark and plan a learning journey. 'Drawing remains at the very centre of the creative and developmental process of design (Shenk, 2007), for two main reasons: developing drawing ability supports both conceptualisation and facilitates the communication of design ideas.

The Scottish CfE has embedded Design and Technology within the new curriculum understanding fully its cultural value, entrepreneurial connections, economic benefits and its social propensity to work innovatively with other disciplines and 'borrowing' from them 'best practices, knowledge and expertise through multidisciplinary activity. The CfE aims 'to ensure an appropriate curriculum for each learner' that enables flexibility and establishes a

'continuum of learning' through interconnected curricula, leading to a richer 'more rounded' experience (Smart, 2013). This direction of travel and these goals are shared by contemporary Design education in HE. At the 'Intersections07' design conference, Johannson stated that: 'great innovation is found at the intersections of disciplines', thus situating interdisciplinarity and design thinking at the heart of activity. Further, that 'complex times require designers to do new and different things' (Myserson, 2007), with four roles for Design emerging: strategist, storyteller, co-creator and rationalist; both story-telling and co-creation are pertinent to our methodology. Later, in 2009 the RSA published its six challenges for Design education, and these chime with the message about the need to co-design, and to communicate through visual and verbal means, revalidating its etymological roots. The activity of interdisciplinarity is not sufficient, in itself, and Blair (2013) questions if we are equipping our graduates with 'elastic minds' through interdisciplinary or multidisciplinary curricula. However, the message is clear, though experiences are variable, that the development of cross-disciplinary and multi-modal activity should continue, especially in relation to professional learning and practice, discipline 'currency' and to enable 'elastic thinking'.

The use of drawing, in J-MapLL, is to develop the process of thinking rather than drawing as artefact. While drawing was a disturbance to many, it was actually this aspect that was effective as an agent of learning. The iterative process of journey mapping necessitates the thinking, planning, creating, sharing and co-creating of learning, as a continuum. In this circumstance J-MapLL utilises the critical thinking skills that we believe are essential to navigate the complex HE educational landscape

4. Empirical Study

4.1 Context: Professional Conversations - sharing and exploring knowledge and practice

The University of Dundee's Excellence in Teaching Awards, for lecturing staff, provided the vehicle, opportunity and space for academics to share knowledge, expertise in teaching, examine new pedagogies and new curricula. It is from this premise that the authors met to discuss their collective understandings of twenty-first century learning and teaching. It was clear that we both considered pedagogy to be generalised across disciplinary boundaries and not subject specific. Consequently, using our interdisciplinary lenses we explored ideas, issues, challenges and potential solutions for the lecturer in relation to curriculum design and the student in relation to seeing the 'big picture' in their programme of study. As lecturers in Education and Design, we noticed students didn't understand HE terminology, programme or module aims, inhibiting their learning and confidence. Embracing the concept of a whole new mind, Pink (2008), we co-created a learning method designed to empower students in the early stages of study by visualising their learning goals through a form of concept mapping of specific aspects of the learning journey. This proposed a practice of drawing as a thinking tool, Robertson (2012), and of promoting the use of visual learning through metaphorical or analogous journey mapping, led to the co-creation and development of the J-MapLL methodology.

In this research project we have piloted J-MapLL workshops with three distinct student groups, to explore learning through story-telling, visualisation, drawing techniques and individual and collective journey-mapping. In this paper we will present our J-MapLL methodology through analysis of three case studies, which constitute the data for this empirical research project.

4.2 Conceptual Framework: the Landscapes of Learning

Through our discussions we realised that teaching and learning happens with different contexts and can be viewed through different lenses, and that these are intrinsically important. We began to see these as 'landscapes' within which learning can occur. Landscapes are important because they are the product of one of the most enduring sets of linkages: the relationship between the physical environment and human society (Whyte, 2002:7).

The relationship between tangible, physical space and social, emotional, cultural and cognitive spaces, we see as linked and important. This project explores how this conceptual framework of the Landscapes of Learning (LL) can be used to support and empower students in the conceptualisation of their learning, especially at the initial stages of study. This was done through a series of LL workshops that directly involved the student participants; moving from consumers of knowledge to producers of knowledge. Learning Landscapes aims to connect thoughts, experiences and practices from life events and educational activity. It stimulates participants' aptitude to link hindsight, foresight and insight to progress on the learning journey, discerning between knowledge acquisition, the participation and production of skill and personal values associated with personal development. To facilitate this it is important to employ multi-modal literacies: writing, speaking, listening, seeing and image making and to position the learners' interests at the centre as the agent and navigator of their learning journey.

4.3 Framing: Journey-mapping in the Landscapes of Learning

Journey-mapping is a visual method used in design to make a client journey, from beginning to an end point, tangible and understandable to multiple audiences. Hand drawn or collaged with photographs, the format of a journey-map is an adapted timeline or storyboard, variable in scale and medium, but, significantly, it will have common symbols and sign posts that are recognisable. It represents the passage of time through a sequence of events and notable actions on a journey. The work of David Sibbet (2010) is pertinent as he uses both graphic histories and landscapes as an elaborate way of telling a story over time. He also promotes the use of the graphic metaphor, which is a picture framework that compares one subject with another to maximise strategy and innovation. In 'Game Storming' Gray *et al.,* (2010) highlight one objective of context mapping is to show external factors, trends and forces in a systematic view. They contend that 'we don't truly have a good grasp of a situation until we see it in a fuller context' (ibid: 84) – it is only then that we are equipped to respond proactively to that landscape.

The three case study groups were introduced to journey mapping in the Landscapes of Learning and our discussion of these will illustrate how we have adapted the workshops to meet the needs of the students and their assignments at our time of intervention. The method we have been focusing on through each study is the use of visualisation concepts to enable 'big picture' thinking and specific goal orientated thinking. Different types of thinking and action require different types of activity; they also use different parts of the brain. In 'A Whole New Mind', Daniel Pink (2008: 2) argued convincingly that students (actually everyone) in the twenty-first century need to incorporate both left-directed brain, logical and analytical thinking, and right-directed brain, creative and emotional thinking to be equipped for the 'Conceptual Age'. He argued that, right-directed brain stimulation encouraged synthesis, creativity and empathy (Pink, 2008) the very aptitudes and conceptual skills required of graduates for employment. Pink (2008) likened the right-directed brain thinkers to what Ray and Anderson's (2000) called 'cultural creatives'; people who 'insist on seeing the big picture' are 'good at synthesizing', have '…women's ways of knowing…' and see '…first-person stories as important ways of learning…' (Cited in Pink, 2008: 60-61). This is relevant to our study as synthesis, and making connections, are important graduate attributes, so too is the utilization of logic and empathy as a way of understanding and behaving. This was distilled by Pink, into what he called the six senses: Design, Story, Symphony, Empathy,

Play and Meaning (Pink, 2008:61). The role of Symphony is important to this methodology of Landscapes of Learning as it is about asking participants to see the big picture; the landscape of their learning and develop aptitudes to connect and pull different pieces of their learning together to make meaning. This type of seeing is quite different from looking and is much more about sense-making through connectedness and context (Roam, 2009).

The significance of the following case studies are the practical applications of making meaning from the use of storytelling, shared narratives, visualisation and mapping to unfold thinking during the learning journey. The emphasis is on both individual and collective learning, the recognition that 'learning happens everywhere' (Kress, 2008), and mindful of the historical, social, political and economic context of education.

5. Methodology: the case study groups

5.1 This empirical research study is comprised of the following three case studies

CS1. BA Early Childhood Practice students are mature students with a small percentage having had pervious HE experience. They study on a part-time on a distance learning mode that is predominately online. Significantly, they are all employed on a full-time basis as it is now a legal requirement that they gain a degree level qualification. The students are all women with a high percentage of them also being mothers, so they are balancing life, study and work. The learning environment is 'virtual' and academic staff recognise this and meet the challenge by creating an online community, supported by a few face-to-face workshops, for those who can travel

CS2. The BSc Design students are primarily directly from school or have completed a year at an FE college. Students study full-time, on campus, towards a BSc; specialising in either Product or Digital Interaction Design. There is an equal gender balance of male and female students on both courses and students share modules and work together in large open plan studios. Some students work part-time to support themselves financially. Their goal is to find employment within their specialist fields of design. There is differing aptitude in visual skills within the two strands of the Design course and not all applicants have a background in art or design. Digital Interaction students may have fewer qualifications in art or design but have computing or mathematical interests. Most Product Design applicants have a traditional art and design portfolio and evidence of graphic communication.

CS3. The Masters of Service Design and the Masters of Ethnography students have completed undergraduate degrees with a first class or upper 2:1 degree or achieved sufficient professional experience to be considered for the Masters programmes. A small percentage of students have come direct from undergraduate degrees at DJCAD. The gender balance is mixed and students are local and international. As post-graduate students, they have a clear understanding of why they are returning to Masters level study.

5.2 Methodology: Learning Landscapes Framework

Story

The LL workshop framework begins with a collective immersive activity, a short archetypal story to set the context and scene. This exemplifies the multi-modal approach that combines visual, textual and aural communication. Story is used to position the participants in the learning journey and emulate the idea that they are in the process of the learning journey that is temporal. The story is a useful devise as it interrupts the student attention from her/his learning objectives and takes them on a journey of discovery – the story. The disruption

creates a degree of cognitive dissonance, which can deepen learning by initiating problem solving and critical thinking. In the workshops we have used various children's picture story books and this is at once unexpected – dissonant - yet familiar and taps into an elemental and core understanding that is situated deep within the learner. The inner child can be unleashed and early experiences of sharing and connecting can be ignited. The use of analogy is heightened as the story unfolds and the characters move through different situations. By telling, and listening to, stories we are able to tap into a collective understanding, an archetype, and through the sharing we are able to frame experiences within a landscape

The participant makes sense of the perspectives and layers of the storytelling through group discussion, thus creating their own story. This varied between the case study groups determined by the intended outcomes, for example, CS1 were read 'What the Ladybird heard' by Julia Donaldson and Lydia Monks to show how mapping and storytelling can help us work together collectively towards shared goals.

Individual Journey Mapping

Participants are introduced to the method of visualisation and facilitation (Sibbet, 2010) and of thinking through drawing (Robertson, 2012) by being asked to create visual maps of their current learning activity. Participants adapt a Sibbet (2010) landscape to match their current situations, developing the key and the spatial dimension to the visual context, provides sharing of experience among the group. The use of resources such as module guides, learning outcomes or assignment guidelines may be pertinent. It is also important to establish the key – the symbols, icons, pictograms - to be used is critical as they have to create effective imagery that is symbolic and metaphoric, because of this they can also have cross-cultural applicability. We did this through a wall mounted map with a simple key of five symbols that represent: the learner; challenges; goals; journey; and opportunities. Heskett (2005: 56) argued that a combination of text and 'imagery is fundamental in understanding communication'. Certainly, there is a relationship between thinking and language; however, a visual image can encapsulate complex and multiple concepts and ideas succinctly (Stokes, 2002) and this is why we have developed the J-MapLL methodology in its multi-modal form.

The students were introduced to the Learning Landscape metaphor and were asked to create visual maps of their journey through the module. Some students immediately reinterpreted the landscape, introducing spirals and steps towards the goal, other students drew the map as represented on the wall. We moved among the students commenting, sometimes questioning, encouraging and listening. Clear symbols and pictures were re-drawn on post-it notes from individual maps and placed on the wall map for all participants to see. Collectively, we celebrated examples of strong imaging, incorporated amusing anecdotes and built a rapport with the group, which helped to acknowledge shared struggles and successes. Each student produced an individual A4 map.

Mapping: context, content, process and purpose

We shared a selection of maps with the students and explained the role of maps and drawing distinction between their context, content, process and purpose. Essentially, the purpose of a map is to navigate the physical environment and our use of maps demonstrates the ease with which we understand a map even if the location is fanciful or imaginative. The map is a metaphor for a journey as it has a starting point and an end point, with innumerable possibilities for travel and discovery on route. Often the journey is circuitous and the line is rarely straight. Our interpretation of this is akin to Ingold's (2007: p116) becoming oneself by negotiating and moving through a tangled landscape 'in its ever evolving weave…it takes us back to the fundamental idea that life is lived not at points but along lines'. Locations such as

Robert Louis Stevenson's 'Treasure Island' map are understood through the cultural connections associated with the literature and the map, its key, title and details. For CS1 a selection of tourist leaflets with maps to gardens, historic buildings were used in conjunction with maps in books that young children would use. The CS3 students were given a London A to Z by its creators Phylis Pearson. In order to create the London map she had to walk the streets of London to evidence them. The CS2 students were not given maps to view but invited to ask staff on the module how they use drawing and mapping in their professional practice.

Collective Mapping

Finally, students are asked to create a group map that completes their activity and results in a community map of sorts. This map and its terrain are determined by the group though it is based on the participants' learning. For CS2 students their subject was an assessed requirement of the module, it involved separate interviews with the Dundee University Student Union and a large scale mapping of the people behind the various roles. This was conducted as part of the Big Draw Campaign and two students put forward the activity to be considered for a Big Draw Inspiration award. By contrast the CS1 and CS3 maps were created within the workshop. The maps were all large scale, with the CS2 map being the most highly finished. CS1 students created a map of their collective journey as a fairground, which was an effective metaphor for the way that they were feeling on their learning journey. The maps from CS3 were client focused and rich in visual imagery, perhaps reflective of their more advanced stage in the learning journey

6. Findings

We met with two of the case study group participants in separate workshops - CS1 and CS2 - the following semester to develop with them the Landscapes of Learning methodology and to ask for feedback on journey-mapping. The participants were asked to recall the journey-mapping exercises they did individually and collectively in the last workshop(s) and to discuss their value. Students were asked to consider four questions and invited to write on post-it notes their responses. The CS1 group were representative of the whole group but for CS2 only a small sample attended the reflective workshop (9 from 39). The following provides a summary of the workshop findings. Students were asked: How did you find the journey mapping? What did you learn from the process? Have you referred back to the map? Have you used this approach again in another context?

6.1 Discussion of the Findings

The findings from the workshops were highly varied. This was not surprising to us, as facilitators, because the implementation of the concept was tailored to meet the needs of the three very different student groups, at both under-graduate and post-graduate levels. It was clear from the study that perceptions about 'academic' learning centred on a traditional conception that was highly literate and more about outcomes. We found that most students did not value processes in learning as highly and this affected their engagement.

6.2 Findings: participant insights

CS1 feedback on the use of Learning Landscapes initially reported a lack of use of the methodology yet through discussion it was noted that that students had used it in several distinct ways, ranging from professional work-specific contexts to a variety of situations at home; one student had effectively used journey-mapping to help her cope emotionally with and a personal tragedy. Insight: the adaptability of the methodology by the more experienced life-long learners, illustrated the aptitudes of agility, empathy and symphony.

We had expected this group to embrace the visual and symbolic aspects of the journey-mapping more openly as this is how they work with pre-school, non-literate children in the nursery; however, they considered the activity of drawing to be 'childlike' and therefore not perceived as having high value and status for adults and in HE.

CS2 student engagement with the journey mapping exercise showed anxiety over the execution and content of the first assignment of visual mapping. The students were confused over the content of the assignment and admitted their own expectations were to produce a highly finished outcome as it was HE; they had also expected their first assignment to be an academic and not a visual assignment. One student considered the presentation of drawing as 'childlike' yet recognised this skill as valuable in her tutor. Essentially, they were judging themselves and others on drawing and graphical ability rather than evaluating the method as a thinking tool. Insight: Students' have many determinants that impact upon their learning and it is important to recognise that these are social and emotional as well as cognitive. There is a need to justify the use of children's story books and clarify the purpose, in relation to the task, if drawing and visualisation as a thinking tool is to gain validity for future students. It was also noted during the workshop discussion that students had taken numerous photos on the study trip but had not used them in an assignment. We propose to amend the journey-map to include a photo collage and rebalance the focus on drawing in the Learning Landscape map. Finally, that the student's expectations and assumptions on entering HE are high therefore we need to manage this transition.

CS3 the students have not had a formal feedback session with us, however, their experience of the workshop has been very successful in 'unfolding thinking' of the creative process and consequently, we are invited to lead a workshop for the forthcoming ECIP international conference, as a CPD event for delegates. Insight: CS3 students produced a 'Storify' account of the visual practice to evidence the use of the Landscapes of Learning approach and how it gave a framework for the project work for the module and the clients brief. Post-graduate students demonstrated many of the aptitudes that Pink (2008) stated as essential in the conceptual age. We believe the combined use of mobile technologies and blurring of the personal and professional domains is a significant factor in this insight.

The findings from the CS3 developed a clear understanding of the role of the journey-mapping in alignment to both their personal progression through module activity and in professional activity in meeting clients' needs. One conclusion is that these cohorts of students have mastered the skills and created this personal-professional balance during their under-graduate degree studies. Another observation is that this group watched the Sibbet (2010) TEDx 9 minute film, which enabled them to see the efficacy of the methodology within the professional context. A further observation is that these cohorts of students were confident in using mobile technologies to enhance their learning and this was evident in their use of Twitter and in blogging, which connected the teaching and learning experience.

6.3 Findings: concluding thoughts

•   Students with a firm grounding in their field of study respond well to the J-MapLL methodology. This was evidenced by the Masters level students and we attribute this to their ability to transfer previous knowledge, understanding and skills – ways of knowing - to any new learning opportunity.
•   J-MapLL should not be an assessed element of the curriculum but rather a methodology that motivates and supports students and staff in the co-design components of learning that brings symphony to various parts of the educational context.
•   J-MapLL workshop facilitation worked best when participants were shown the context and results of visualisation and its relatedness to the professional context. This is an important facet of the methodology and relates to students' perceptions about the value of

the task. For CS1 drawing evoked the childlike behaviour of the children in their care and was perceived as dissonant in the HE learning context.

• J-MapLL provides the opportunity to think individually, to share collectively, which is resonant with Kress's (2008) theory that communication is a social glue but also it elevates the importance of stories and narratives as a vehicle for cultural and social understanding (Kingsley and Normand, 2013: 12).

Conclusion

Learning is expansive and connects the individual learner's social context. The methodology incorporated in the Landscapes of Learning workshops necessitates participants moving from consumers of knowledge to producers of knowledge, skills and aptitudes and from drawing explicit meaning from their individual and collective experiences. Journey-mapping in the Landscapes of Learning (J-MapLL) aims to transform learning by helping learners to make connections between thought, experience, practice, and action in the social, cultural and emotional arena and in educational endeavour. J-MapLL encourages participants' aptitude to use previous experiences, reflection, narratives and learning to reconceptualise and progress on the learning journey, discerning between knowledge acquisition and the, participation in, and production of, knowledge through personal and professional development. The application of inter-disciplinary lenses and the use of multi-modal literacies, including, writing, speaking, listening and image making, are necessary to position the learners' interests at the centre as the agent, creator and navigator of their journey.

The opportunities afforded by the use of mobile technology and social media means that this methodology can be developed to include computer generated image-making and the creation and sharing of 'virtual' conversations, narratives and stories.

Institutions will have to define and be clear about their place in a larger set of offerings. Increasingly students have to assess which learning mode and institutional approach best suits them and accept that 'designing' their own education is in and of itself an important education (Feldman, 2009).

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