Feature

DESIGNING FOR HEUTAGOGY:
AN INDEPENDENT LEARNING PATHWAY APPROACH

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ABSTRACT

Heutagogy provides an approach to adult education that is based on learner determined learning and it recognised that this requires a transformation of learning processes beyond a teacher-delivered focus on content. But there are few guidelines or even descriptions of application of heutagogy to whole programmes of learning. In this paper we describe a case study of an independent learning pathway approach whereby heutagogy is the underlying principle for a suite of work-based learning professional practice programmes. Questions for further development and research are discussed.

INTRODUCTION

There are a variety of different approaches to teaching and learning. This paper explores heutagogy as a learning environment for work-based learning, using Capable NZ as a primary case study.

Hase and Kenyon (2000) defined heutagogy as the study of self-determined learning. It applies a holistic approach to developing learner capabilities, centering learning as an active and proactive process (Blaschke, 2012), with learners acting as "the major agent in their own learning, which occurs as a result of personal experiences" (Hase and Kenyon, 2007, p112).

While heutagogy has roots in self-directed learning, it "specifically renounces the teacher dependency associated with both pedagogy (the study of teaching) and andragogy (the study of teaching adults)" (Anderson 2010). This progression to heutagogy is characterised by learners progressing in maturity and autonomy (Canning, 2010). More mature learners require less instructor control and course structure and can be more self-directed in their learning with less and course scaffolding (Canning & Callan, 2010; Kenyon & Hase, 2010).

The instructor, then, becomes a facilitator and a guide for the learner's self-direction and focuses on the development of abilities to reflect, undertake action research, and in the use of tools. As Canning & Callan, 2010 described heutagogy fundamentally changes the role of the educator in higher education from one of "'expert' in a body of absolute knowledge" to one where learning "is achieved through shared meaning making in a relational, facilitative approach to reflection" (p75).

Blaschke (2012 p57) argues that "A heutagogical learning environment facilitates development of capable learners and emphasizes both the development of learner competencies as well as development of the learner's capability and capacity to learn".

Anderson goes further and argues that self-determinism itself is "critical to life in the rapidly changing economy and cultures that characterize postmodern times" (p42).

Heutagogy has been picked up by the education technology community, Blaschke (2012 p57) describes it as "net-centric". For distance learning heutagogy provides both raison d'être, and a challenge. Rather than distance education being a poor relation of a traditionally taught face-to-face learning experience, heutagogy positions distance education as a viable alternative, better even - rather than the educator being bogged down in delivering content, they become guides "in learners' interactions with varied resources to resolve problems and to gain personal understanding" (Anderson 2010 p42). Instead of lectures with sage-on-stage delivery, mobile technology encourages participation, questioning and collaboration (Cochrane *et al.* 2012).

In this paper, however, we are not concerned with the digital environment or learning management systems. These aspects of the learning environment, are important, but in the case of work-based learning they are much less important than the experience generated by the culture and processes of the self-determined learning programme.

It could perhaps be argued that heutagogy within higher education is a contradiction in terms. The deification of knowledge and the structures developed over centuries to regulate, protect and deliver this content in a carefully staged manner might seem at odds with what must seem to many an anarchic approach of learner-determined learning. Blaschke (2010 p63) raises this issue "the higher education response to heutagogy so far has been one of reluctance, which could be due to the impracticality of implementing a full-blown educational framework of heutagogy".

McAuliffe *et al.* (2009 p4) acknowledged the learner empowerment from heutagogy and the educator/facilitator should "maintain a distance appropriate to encouraging learners to actively engage in that world through the process of discovery as it relates to their own interests and needs", but that they should "should remain a vital part of helping learners interpret their world". McAuliffe *et al.* also questioned whether "guidelines set by certain internal and external stakeholders (would) allow students to have 'control' over what is or isn't assessed".

While there are numerous studies describing elements of a heutagogical approach in higher education (particularly in distance education: Cochrane *et al.* 2012), or a heutagogical approach applied to elements of a higher education programme such as clinical practice elements of nursing training (Bhoyrub *et al.*, 2010), this paper describes an attempt to base a suite of programmes on a heutagogical principles.

Crucially, heutagogy implies a different relationship with the curricula. Hase and Kenyon (2007) describe how heutagogy goes beyond andragogy's focus on adult education with self-directed learning linked to experiences to a different relationship with the curricula "we thought that andragogy did not go far enough...curricula were still very much teacher-centric with little opportunity for any real involvement at a micro or even macro level by the learner" (p112).

In relation to practice elements of early childhood training, Canning and Callan (2010 p74) described a desire to "weave capacity for heutagogy into the foundations of our study programmes". So the question for this paper is how an institution can focus on processes of learning through the design and delivery of programmes. In other words, what curricula and programme structures permit this weaving?

In a 2007 paper exploring the formation of Heutagogy, Hase and Kenyon described it as a "child of complexity theory". They described how it combines action research, complexity theory and a focus on capability:

"Action research allows experimentation with real world experience where the learning is in the hands of the participants. This learning can then be tested in subsequent learning cycles… (with) a legitimate observer who is also a participant and learner all at the same time" (p113)

Flexibility of being able to try and understand unpredictable and complex social phenomena. In addition to both complexity theory and action research emphasise the emergent nature of learning. (p113)

Beyond competency, capability is concerned with unknown contexts that extend beyond competence. Modern workplaces are complex adaptive systems that provide continuous and rapidly changing contexts. (p114)

Hase and Kenyon (2007) use these antecedents to derive design implications, including (p114):

- Recognition of emergent nature of learning and hence need for a living curriculum as key driver

- Involvement of learner in this living curriculum

- Knowledge and skill acquisition are separate processes and need different approaches

- Identification of learning activities/processes by the learner not just the teacher

- Using action research and action learning as meta-methodologies in the learning experience

- Involvement of learner in design of the assessment. Self-diagnosis and application of knowledge in real life contexts

- Collaborative learning

- Coaching for individual learning needs and application

Blaschke (2010, p64) summarised the programme design elements that support a heutagogical approach:

- A heutagogical approach to learning and teaching is characterized first and foremost by learner-centeredness in terms of both learner-generated contexts and content.

- Learner-defined learning contracts: Learning contracts support students in defining and determining their individual learning paths.

- Flexible curriculum: In a self-determined learning environment, the learner is the driver in creating flexible curriculum, which is defined by the student: learners create the learning map, and instructors serve as the compass

- Learner-directed questions: Learner-directed questions and the discussion that results from these questions are what guide learners and serve as mechanisms for helping learners make sense of course content, bring clarity to ideas, and promote individual and group reflection

- Guiding learners to define self-directed questions is one of the biggest challenges facing developers of heutagogical courses, as designers must be "creative enough to have learners ask questions about the universe they inhabit" (Kenyon & Hase, 2001, para. 29).

- Flexible and negotiated assessment: In heutagogy, the learner is involved in designing his or her assessment.

We use these elements in the following sections as the lens to examine the programmes of Capable NZ.

CAPABLE NZ

Otago Polytechnic has adopted a heutagogical-based teaching and learning strategy that has a radical impact for education. Exemplifying this methodology is the work-based learning approach of Capable NZ (the professional practice school within Otago Polytechnic). Capable NZ works with learners to recognise and extend learning in a professional work-based context at both undergraduate and post-graduate levels. At undergraduate levels, Capable NZ works with learners to align their professional framework of practice - their professional identity - with graduate profiles. These learners are expected to learn new areas, mostly to wrap their practice in theoretical context, but there are no formal classes. Instead the focus is on an individualised supportive environment for personal reflection.

Figure 1: Capable NZ value set (Otago Polytechnic).

The value-set underpinning this approach can be seen in Figure 1. This figure is in the style of the Agile Manifesto (Beck *et al.* 2001) whereby the items on the left of each statement are valued over the items on the right. In this case, the left-hand items describe a heutagogical-based approach.

Capable NZ background

Capable NZ was established in the late 1990s as CAPL – The Centre for the Assessment of Prior Learning, and began by offering with sub-degree qualifications. The initial approach to recognising prior experiential learning (RPL) was based on an assessment process concerned with gathering evidence that proved learning had occurred and matched the expected learning outcomes of the targeted qualification, primarily the Bachelor of Applied Management (BAppMgt).

In 2008 CAPL was renamed Capable NZ, and the BAppMgt was augmented with the Bachelor of Social Services (BSS). These two degrees are the most frequently undertaken, although the Capable NZ undergraduate programme portfolio now includes degrees in culinary arts, design, engineering, and information technology, as well as diplomas in business, construction management, quantity surveying, building control, and tertiary education. Indeed, through Capable NZ a learner can obtain almost all of the qualifications available at Otago Polytechnic.

Independent Learning Pathways for Professional Practice

Hase and Kenyon (2000) place responsibility of heutagogy with the student where they are able not only to engage in a process of knowledge creation, but also have the opportunity to determine their learning experience from the influence of their professional practice.
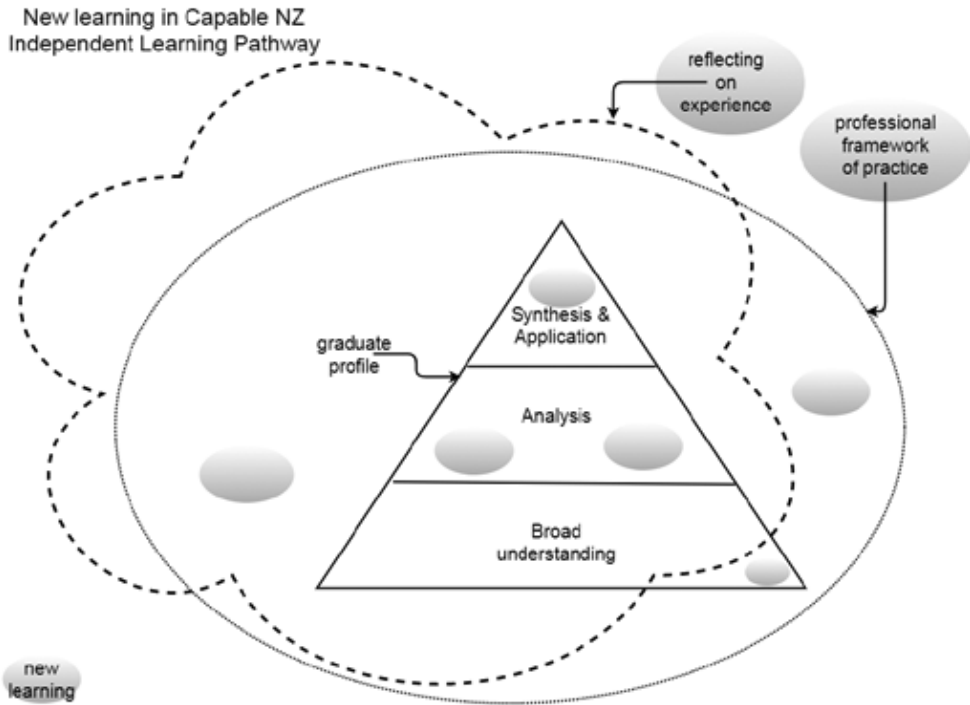
Figure 2: The Independent Learning Pathway is based around the learner's professional framework of practice that aligns with (and hopefully exceeds) the graduate profile of the qualification. The starting point of this journey is reflecting on experience (the dashed line) and then continues with new learning, determined by the learner, to solidify the articulation of the learner's professional framework of practice.

The Independent Learning Pathway (ILP, Figure 2) is Capable NZ's primary approach to learning. Currently about 250 people graduate each year through this process, mainly in the Bachelor of Applied Management, and the Bachelor of Social Services (Otago Polytechnic internal reporting). This pathway is for practitioners who wish to use experiential knowledge as the basis for a new learning journey that results in the development of a framework of practice that aligns with the graduate profile of their chosen degree (often with the endorsement of an identified major). It is important to note that the ILP approach is not an assessment process, but a learning process, one which brings about new knowledge and understandings for the learner. It is not just a process of gathering evidence to prove that learning has already taken place. This intensely reflective process helps learners identify the experiences that shaped their practice and continues to shape practice, extract the learnings from those experiences and make sense of those learnings through the development of a framework of practice that aligns with the graduate profile for that discipline. Learners are supported by a facilitator.

It is because degrees are defined through graduate profile outcomes that alternative learning pathways such as those provided through Capable NZ are possible. What is required is that the learner develops the specified 'specialised technical or theoretical knowledge' as well as the Level 7 (bachelor degree level) generic capabilities, and there is no requirement as to how these knowledge and skills be acquired. Indeed, the NZ National Qualifications Framework (NQF) specifically empowers learners to achieve "in ways most suited to their educational, work or cultural needs and aspirations". (NZQA 2016 p3). This may include credentialing learning obtained formally or informally towards their qualification. The NZQF does not put limitations on how or where people can learn (NZQA 2016).
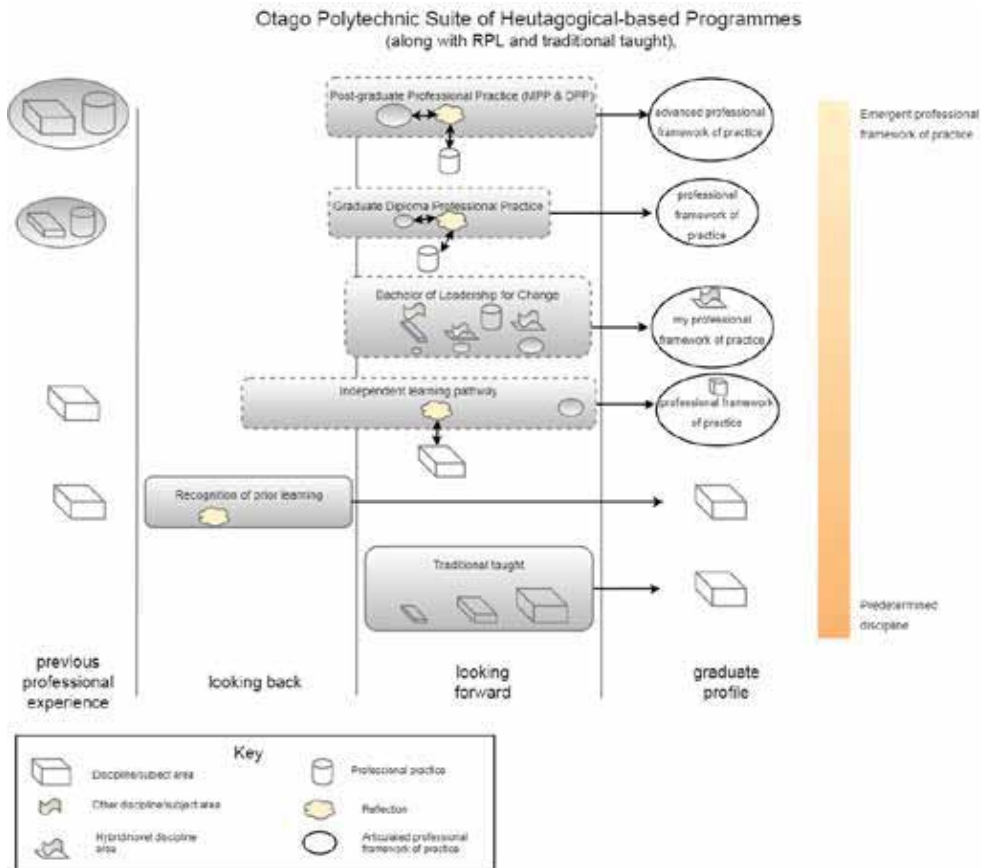
Figure 3: Qualifications designed for heutagogical delivery, from top: DPP and MPP; GDPP; and ILP (a delivery approach to various qualifications), and for comparison an RPL degree, and a traditionally taught degree (Otago Polytechnic).

Figure 3 shows the learning focus of the Capable NZ professional practice suite - including new qualifications discussed in the following sections, and with an RPL and traditional taught degree for comparison. At the bottom of the diagram, the traditional taught vocational degree can be characterised as having a largely predetermined set of experiences designed to teach students the required skills for a particular predetermined (and usually narrow) discipline. There is little or no incorporation of previous knowledge or experience and it is primarily a content heavy curriculum and teacher-centric delivery, perhaps with, say, some choice in essay topics and practical assignments.

The RPL qualification, as used by the precursors to Capable NZ to meet specific industry needs (such as changed requirements for professional registration) is, by contrast, largely the opposite of the taught degree. The process is one of validation of existing knowledge with credentialing against a specific graduate profile. While it can be a reflective process, there is little or no attempt at incorporating new learning, except as a result of this process, to undertake further learning or courses to address identified gaps.

The Independent Learning Pathway, and the other professional practice pathways, are drawn here with dashed boundaries. This is to represent the increasingly blurred boundary between the worlds of work and education that these learning journeys traverse.

At the top of Figure 3, the Capable NZ professional practice post-graduate qualifications for experienced practitioners are the Master of Professional Practice, and the Doctor of Professional Practice (MPP and DPP). These can also be considered individualised learning journeys. For both, the goal is the advanced professional framework of practice. This is articulated in a "practitioner thesis" where the defensible argument is that professional framework of practice. The process starts with a review of learning that leads to stating the learner's aspirational framework of practice (e.g.: "to become a thought leader in values driven software development"). This is paired with an organisational practice goal (e.g.: to create a culture of values driven software development). The main work then becomes the professional development thread, interwoven through reflective practice to the work-based professional practice change (usually formally described as "auto ethnographic action research"). Learners are supported by academic and professional mentors. The graduate profiles for both the MPP and DPP are written in terms of higher levels of thinking in a post-disciplinary sense, rather than for specific disciplines.

Note on disciplinarity terms: we assign terms according to this plan: Candidates come from their discipline, we encourage holistic multi- and trans-disciplinary thinking, and the approach of professional practice is post-disciplinary.

The Graduate Diploma in Professional Practice is similar (at least at this level of abstraction) to the MPP. It is an undergraduate qualification for experienced people who do already have an undergraduate degree (or equivalent experience) which enables the articulation and development of their practice.

DISCUSSION

In this section we link the Capable NZ ILP approach back to heutagogical and wider education literature and discuss the implications of this for future development and research.

Capable NZ's existing ILP programmes (both undergraduate and postgraduate) clearly follow a learner-determined heutagogical approach. For all of these, the learner is experienced and is combining existing work practice knowledge with new learning to articulate their new professional framework of practice.

Stephenson (1998) considered the implications of supporting student autonomy. He described situations where there is a "transfer of responsibilities" whereby "students have direct responsibility for aspects of their education which are either not often directly addressed within an institutional setting (such as student motivation and personal development), or for aspects which are the traditional preserve of teachers and accrediting bodies (such as the direction, content, pace, location and assessment of the student's studies)". Stephenson argued that this transfer of responsibility brings inherent risks, and that it is the responsibility of the teacher (facilitator in our case) and institution to support learners in assuming these "daunting responsibilities".

Joyce et al. (2008) consider the differing characteristics of facilitation and what is required to be an effective facilitator. A good facilitator has many interconnected, paradoxical roles:

> "Simultaneously we [teachers] are managers of learning, curriculum designers, facilitators, counsellors, evaluators and, reluctantly disciplinarians. To the best of our ability, we modulate across roles according to individual and group needs as we select and create learning experiences for all our students". (2008 p118).

This characterisation of facilitation sums up clearly the many roles that Capable NZ facilitators adopt in their practice; the skill is in knowing when to be what. According to Costley and Dikerdem (2011: 38), the facilitator works "alongside the student to develop rather than direct the students' understanding". When considering facilitation, at a philosophical level it is difficult to go past the work of Freire and his emancipatory view of transformation (e.g. 2000). He sees the teacher not as someone who provides answers to problems, but as someone who helps learners gain a form of critical thinking about the situation. He called this 'conscientisation'. Conscientisation (or conscious-raising) enables an understanding that the world is not fixed and is open to transformation, thereby

empowering learners to see their place in the world in a different way. In so doing, it is possible then to imagine a new and different reality.

The role Freire espouses for teachers is the role of facilitator in Capable NZ. Furthermore, he advocates for a relationship of trust and communication between teacher and pupil, based on mutual respect and humility, which in turn means the teacher also learns and the learner also teaches. Thus, learning and teaching become a collective activity, a 'dialogue' between the parties, rather than the traditional transfer of knowledge from teacher to learner. Again, this captures the very essence of the facilitator/learner relationship in the Capable NZ programmes.

Given the role of career development in all the Capable NZ programmes, it is also useful to consider the facilitators as career counsellors. The works of Carpenter (2010), Hall (2002) and Amundson (2003, 2009), to name but a few, provide invaluable insights into the skills needed of a facilitator in a higher education context. These are the skills necessary for developing a trusting, respectful and collaborative relationship, as well as the ability to elicit the learning that the learners reflect on, analyse and critique to the level required for a degree. The authors discuss developing relationships (Hall 2002), demonstrating a climate of "mattering" and active engagement (Amundson 2003, 2009), and lastly, the capacity to support and guide clients to develop robust capabilities for positive futures for the 21st century workforce (Carpenter 2010). Thus an important area for future development and research is the articulation and testing of a set of capabilities for facilitators themselves.

Hase and Kenyon (2007) described heutagogy as a "child of complexity theory" and this has implications for the design and perception of Capable NZ's heutagogical programmes. Anderson (2010 p39) described how complexity theorists are often at odds with positivist researchers and educators, who attempt to eliminate or control all the variables that influence learning. Rather, complexity, and hence heutagogy, seeks to create learning activities to allow effective behaviour to emerge and evolve. Conversely, complexity theorists seek to understand features of the environment; especially the social or structural norms or organizations created that resist overt or covert attempts at self-organization. McElroy (2000) noted that "the point at which emergent behaviours inexplicably arise, lies somewhere between order and chaos" (p196). This sweet spot is known as the "edge of chaos (where) complex systems innovate by producing spontaneous, systemic bouts of novelty out of which new patterns of behaviour emerge" (after Kauffman 1996).

Bhoryrub *et al.* (2010) describe nursing practice as "themed with complexity and unpredictability, and hence uncertainty" (p322) and that "the learner, from a heutagogical perspective, is the only relative constant within an environment of unpredictable variables and is hence best placed to direct and embed learning as it arises" (p325). This uncertainty is not something that should be designed out of education, instead heutagogy provides a vehicle for "making sense of the necessary uncertainties" (p326), or as Anderson (2010 p40) describes, "enabling learners to surf at the edge of chaos", and not to "eliminate or constrain the creative potential of actors engaged at this juncture".

Heutagogical education is by necessity surfing at the edge of chaos.

A further implication of the uncertainty, is that of emergence, particularly of emergent professional frameworks of practice. Further research should describe the nature of professional practice, change in the learners - and influence on the thinking and practice of others (Canning 2010, p59). Research should include the role and integration of the notion of ethical practice and sustainable practice (Mann 2011). From a research accounting perspective, there are also questions about the extent to which this professional practice change meets criteria for research impact.

New Zealand is founded on a partnership between the crown and Māori. In Otago Polytechnic's case, this is manifest in a Memorandum of Understanding between the Araiteuru Papatipu Rūnaka (local indigenous people) and Otago Polytechnic. This underpins all of our activities, including that of Capable NZ. The Kāi Tahu vision document, "Ngāi Tahu 2025", stresses the importance of education as an enabler of wider goals, of tino rangatiratanga, in "the ability to create and control our destiny". A key driver is that, "all initiatives and programmes must be future orientated",

and a key assumption is of the integration of education. The key phrase here is "tino rangatiratanga" which means absolute sovereignty or self-determination. Further research will continue to explore the relationship between this self-determination and a heutagogical approach.

A key concept in heutagogy is that of double-loop learning and self-reflection (Hase & Kenyon, 2000). In double-loop learning, learners consider the problem and the resulting action and outcomes, in addition to reflecting upon the problem-solving process and how it influences the learner's own beliefs and actions. Within the ILP process, learners do question and test their own personal values and assumptions, for example in the review of learning in both undergraduate and postgraduate but it is not known if they explicitly realise they are learning how to learn. Nor, indeed if they recognise that learning has taken place. Canning and Callan (p76) describe how for most learners

Reflective practice is a totally new dimension to learning and requires explanation and support. Previous experiences of learning encouraged an 'absolute' approach to knowledge as something finite, with assessment based on finding 'right' answers – resulting in dependency on academic staff. Reflective practice and heutagogy is the means by which students can formulate their own ideas once they have navigated the emotional turmoil that results in this process.

Similarly, Caminotti and Gray (2012) describe the importance of storytelling for adult learners (for andragogy), we would contend that it is even more important in heutagogy.

Further research should focus on the role of learning - did the learners know they were learning? Was it transformative? Did it involve "emotional turmoil"? How can we construct opportunities for learning how to learn that do not become a requirement that sits uneasily with heutagogy? It would be useful to carry out longitudinal studies of learners in these heutagogical programmes. Also, to explore the relationships between transformation in learning and change of practice in the learner (and beyond).

In terms of surfing the edge of chaos, a challenge for Capable NZ is meeting organisational expectations. For example, how do student-determined outcomes meet requirements for all assessments to be specified on a course descriptor to be handed out in day one class? To some extent the issue is with the models used. Wall *et al.* (2017) explore a matrix model with two dimensions: delivery (existing and new), and focus (broad and narrow curricula), giving four classes "piggybacking", "digging deep", "mainstreaming", and "focusing". Work-based learning, Wall *et al.* argue, spans the middle of the matrix. We would argue that the ILP approach doesn't fit this matrix at all.

A significant part of heutagogy encourages a space where collaborative reflection can take place. In most of the heutagogical literature this is seen as a community of practice, or communities of learners. Canning and Callan (2010), for example, describe approaches that "promote knowledge sharing rather than knowledge hoarding" (p74) in classes of early years learners. Such communities of learners are a rarity in Capable NZ. Partly this is because of geographical and temporal separation (learners can start any time) and the post-discipline professional practice approach might mean they are the only current learner in their field. Where groups of learners do form, they are usually pre-existing community - such as a group of work colleagues who have decided to undertake study together, or a wider cultural or family group. Instead Capable NZ has encouraged learners to consider their existing networks as communities of practice. Further research should explore the potential for communities of practice within the ILP approach.

In Figure 3 we used the timing of experiential learning to characterise the various Capable NZ offerings. It would be useful to extend such models to position heutagogical approaches in a wider sphere of learning. Within work-based learning two clear paradigms can be seen. The first is where the main relationship is between the learning and the academic institution and the "work-place" provides a vehicle for learning. These might be work-based learning through negotiated projects right through to extended work placements and internships (Pegg and Caddell 2016, Fletcher-Brown *et al.* 2015 employagility, Feldmann 2016, Algers *et al.* 2016). A second approach is the recognition of the inherent learning in work itself with concepts such as the lived curriculum (Moore 2004) or practice-based innovation (Ellström 2010). The relationship here is worker/learner and employer. Where higher education does

get involved it tends to be as a credentialing service, usually post hoc as Otago Polytechnic's earlier RPL of partial or whole qualifications. When the learning becomes new learning, the approach goes beyond "about work" to become "in work, at work, for work" (Lester and Costley 2010).

CONCLUSION

This paper explores heutagogy as a learning environment for work-based learning, using Capable NZ as a primary case study. Capable NZ's Independent Learning Pathway approach follows heutagogical principles in the design and delivery of its programmes. But it does raise challenges and questions which are opportunities for development and for further research.

This paper is based on a single case study. As such it is limited to describing the experiences of one institution in implementing a heutagically based approach. Care should be taken with generalizing from this case. Further, no success metrics are given here, and it would be useful to include learner voices, possibly through longitudinal study.

- Driven by the necessity of "surfing at the edge of chaos", future research directions include:

- Guidelines on identifying the sweet spot of barely sufficient structure to provide scaffolding for independent learners;

- Longitudinal benchmarking of learners in heutagogical programmes;

- he nature of "professional practice" and the integration of capabilities and meta-capabilities;

- The development and testing of ethics processes for heutagogical learning;

- The role of communities of practice in a distributed population of ILP learners;

- The extent to which learners experience an emotional trauma (and potential roles of scaffolding and emotional literacy training);

- The relationship between indigenous concepts of self-determination and the self-determination of the heutagogical approach;

- The role of transformational learning, and aspects of that (such as the role of storytelling and narrative as a learning tool) and the relationships to change in practice; and

- Facilitator capabilities for delivering programmes via an ILP approach

- Development of models to better describe the structures within and between heutagogical programmes and in comparison with traditional programmes.

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