

Unleashing the Power of Learner Agency

Stewart Hase & Lisa Marie Blaschke

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Stewart Hase

Dr Stewart Hase has always been a believer in human agency, and he first realised that people have agency over their own learning while watching nurses learn at work in the 1970s. As an educator, he started experimenting with learner agency by providing nurses with the opportunity to negotiate their own learning within a very structured curriculum. The experiments continued on into higher education in both face-to-face and distance education, and in professional development programs in workplaces as a consultant for many years. Finally in 2000, Stewart and Chris Kenyon put a name to a set of principles and practices that put the learner at the centre of the learning process and called it heutagogy, or self-determined learning. Now an independent scholar, consultant and psychologist in clinical practice, Stewart is semi-retired and lives in a small fishing village in the north coast of NSW, Australia. In between traveling, painting, writing, fishing, golfing, and grandchildren, Stewart still seeks to better understand how people learn. www.stewarthase.com.



Lisa Marie Blaschke

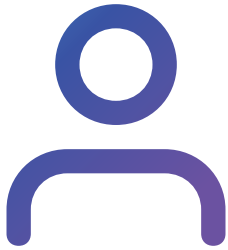
Lisa Marie Blaschke is program lead of the online Home Hub at Learnlife in Barcelona, Spain. Previously, she was program director of and instructor in the Master in Management of Technology Enhanced Learning at the University of Oldenburg, Germany, as well as a senior researcher at DHBW in Heilbronn. She is a former executive committee member of the European Distance Education and E-Learning Network (EDEN) and is a Senior EDEN Fellow. Lisa has a BS in Technical Communication, and two master's degrees (MDE, MBA), and a PhD in Education. Prior to academia, Lisa worked for SAP in Walldorf, Germany, leading and implementing enterprise-wide knowledge management and training processes and solutions. Lisa's research interests are in the areas of self-determined learning (heutagogy), online collaborative learning, and the pedagogical application of web 2.0 technology and social media.



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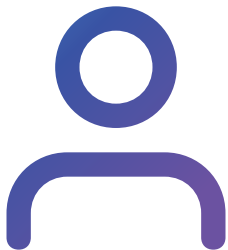
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Author Biographies



Nikoletta Agonács

Nikoletta Agonács holds a bachelor's degree in Romanesque Philology, specialised in Italian and with a minor in English studies; a master's degree in Foreign Language Teaching (Italian and Hungar...



Shlomo Back

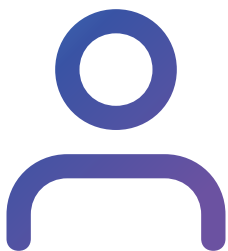
Shlomo Back is a Professor of Philosophy of Education and the former president of Kaye Academic College of Education. He practices heutagogy in his courses, and his fields of research include Epistemo...



Maha Bali

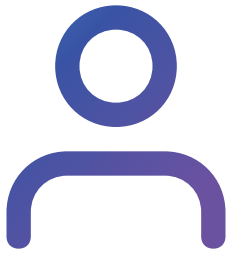
American University in Cairo

Maha Bali is Associate Professor of Practice at the Center for Learning and Teaching, American University in Cairo. She has a PhD in Education from the University of Sheffield, UK. She is co-founder o...



Ilanit Bar-Tov

Ilanit Bar-Tov is the Principal of Tomer, an experimental elementary school in Beer Sheva, Israel. She has been working in the Israeli education system for 27 years. Bar-Tov holds an M.A. in Administr...



Lisa Marie Blaschke

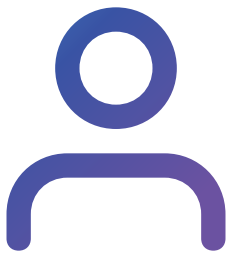
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Aras Bozkurt

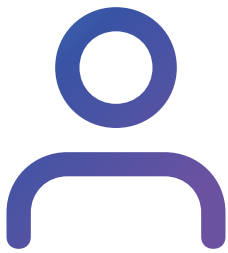
Anadolu University, Turkey

Aras Bozkurt is a researcher and faculty member in the Department of Distance Education, Open Education Faculty at Anadolu University, Turkey. He holds MA and PhD degrees in distance education. Dr. Bo...



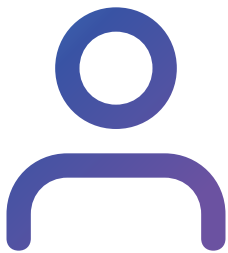
Devin Carberry

Devin Carberry is the Director of Learning and the founding learning guide for Learnlife Barcelona. For the last twenty years, Devin has worked in a variety of educational settings – from after ...



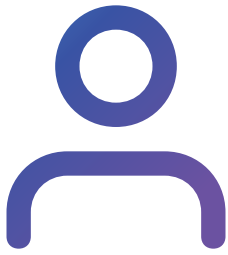
Andy Collis

Andy Collis (BA.Hons, A.T.D., M.A., PhD.) was born in Nottinghamshire, U.K., in 1956. He gained a BA. Hons in Fine Art Painting & Printmaking, from Sheffield University, taught art in high schools,...



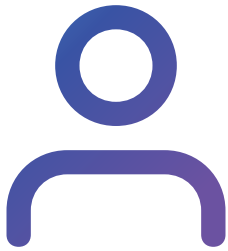
Dave Cormier

Dave Cormier is currently working on digital learning strategy and special projects with the University of Windsor. As a change leader, an educational researcher and learning community advocate he has...



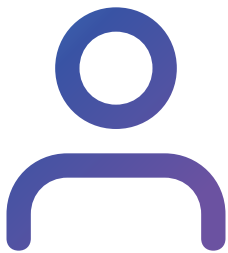
Matt Crosslin

Matt Crosslin, Ph.D. is currently an Instructional Designer II at Orbis Education, where he works with faculty to create student-centered, active learning-based courses. He is also part-time faculty a...



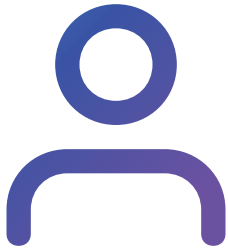
Nigel Ecclesfield

Nigel Ecclesfield is an independent researcher exploring learning, teaching and the use of digital technologies for learning, having worked in the English post-compulsory education sectors from 1978 t...



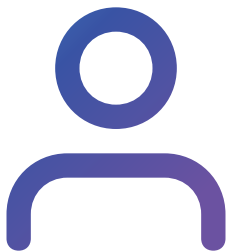
Philip Ecclesfield

Philip Ecclesfield has experience of running outdoor nurseries including managing an award-winning setting, and running training for teachers, parents and managers in schools and nurseries. Phil is an...



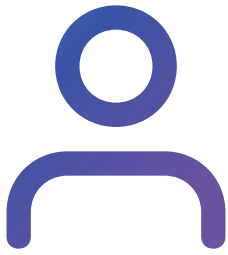
Toqa el Ahwal

Toqa El Ahwal is a 21-year old marketing senior at The American University in Cairo. Previously living in Alexandria before moving to Cairo to live through the 4 year university experience that helped...



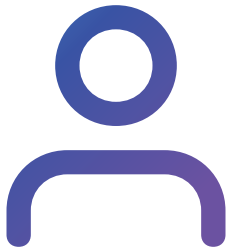
Youssef Fahmy

Youssef Fahmy is a chemistry graduate student from the American University in Cairo. He is a musician in the Egyptian metal/rock scene and plays in the current underground music as a bass player. He a...



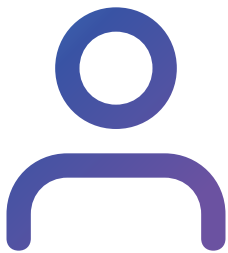
Fred Garnett

Fred Garnett started teaching about the social impact of technology in 1984. When the web came along, he started building web-based learning projects, becoming Head of Community Programmes at the UK D...



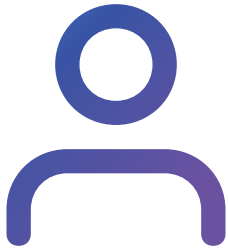
Amnon Glassner

Amnon Glassner (PhD) is a senior lecturer and pedagogical guide at Kaye Academic College of Education. His main research interests are heutagogy, cognition in education, creative and critical thinking...



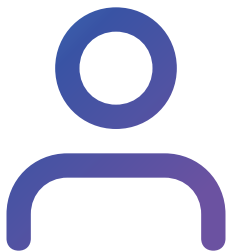
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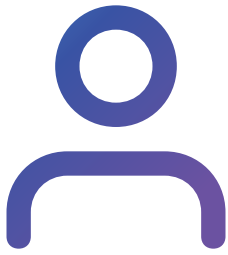
Mai Hashad

Mai Hashad is a former student of the American University in Cairo (AUC). She graduated a in 2019 with a major in Finance and a double minor in Math and Financial Mathematics. She is currently working...



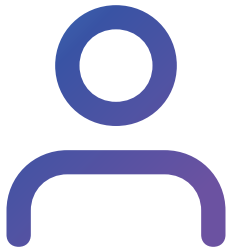
Khaled Abou Hussein

Khaled Abou Hussein attended school under the British IGCSE system and went on to graduate from the American University in Cairo in the Spring of 2020. Majoring in business administration with a conce...



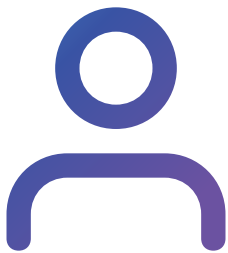
Haya Kaplan

Haya Kaplan (PhD) is a senior lecturer at Kaye Academic College of Education. She is the head of the Center for Motivation and Self-Determination as well as the head of Kaye Induction Unit. Kaplan is ...



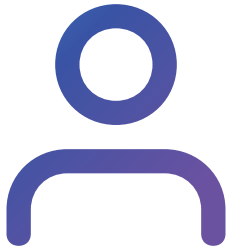
Chris Kenyon

Chris Kenyon has worked in every level of education over the past sixty years. He has also been a consultant to governments and organisations in Europe, Africa, North America, the Middle East and Asia...



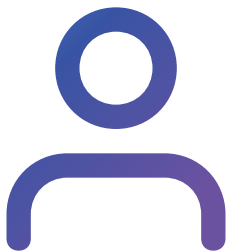
Vijaya Bhanu Kote

Vijaya Bhanu Kote is a teacher and headteacher living and working in a remote rural location in Andhra Pradesh in India. She has been teaching since 1998 in primary schools, developing learning activi...



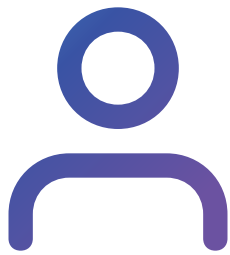
Val Margarit

Val Margarit is Associate Dean of Academic Affairs at Keiser University, Pembroke Pines, Florida. Previously, Val was a K12 teacher, college professor and department chair, course developer, and facul...



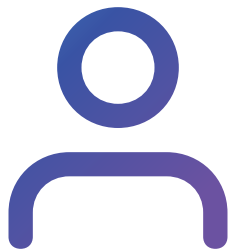
João Filipe Matos

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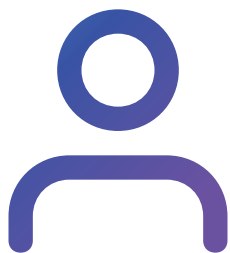
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Prof. Maria Northcote is the Director of Higher Research Degrees at Avondale University College (Lake Macquarie, NSW, Australia). She has been an active educational researcher since 1998. Most of her ...



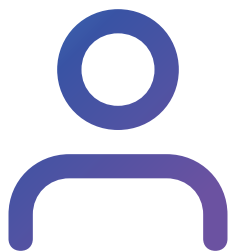
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Jean Reale

Jean Reale has over 20 years' experience as a teacher and educational technologist in both the public and private sector in Ireland with a specific focus on creating inclusive learning environments....



Motladi Angie Setlhako

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Transformational Learning	1
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Agentic Engagement



Promoting Agentic Engagement and Heutagogy in Tomer Elementary School in Beer Sheva, Israel

architectures of participation



Learner Agency and Architectures of Participation

Art Education



Heutagogy in Action: An Action Research Project in Art Education

Connectivism



Learner Agency and the Learner-Centred Theories for Online Networked Learning and Learning Ecologies

cosmologies



How Can We Green Our Learning?

Course Design



Conceptualising and Designing Self-Mapped Learning Pathways Courses to Encourage Learner Agency and Equity

curricula



How Can We Green Our Learning?

Design



So, You Want to Do Heutagogy: Principles and Practice

Digital Technologies



Heutagogy and Work

Distance Learning



Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

Diversity



Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

E-Learning



Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

early years education



Learner Agency and Architectures of Participation

Elementary Education



Promoting Agentic Engagement and Heutagogy in Tomer Elementary School in Beer Sheva, Israel

Equity



Conceptualising and Designing Self-Mapped Learning Pathways Courses to Encourage Learner Agency and Equity

Experience



Reflections of Heutagogy and Learner Agency

experienced researchers



Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

Feedback



Reflections of Heutagogy and Learner Agency

framework >

Learner Agency in Distance Education Settings: Understanding Language MOOC Learners' Heutagogical attributes

governance >

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Greening >

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Heutagogy >

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So, You Want to Do Heutagogy: Principles and Practice

higher research degrees >

Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

Informal Learning >

How Can We Green Our Learning?

insight >

Learner Agency in Distance Education Settings: Understanding Language MOOC Learners' Heutagogical attributes

Instructional Design >

Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

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Help Me Put on This Jetpack: Propelling Learner Agency at Learnlife Barcelona

Learner Agency >

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Supporting Learner Agency Using the Pedagogy of Choice

Yeah, Sure! Developing My Own Learning Agency (A Craft of Learning?)

Learner Empowerment >

Transformative Teaching and Heutagogy

Learner feedback >

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learner-contributed content >

Fostering Learner Agency in a Digital Literacies Course in Egypt: Reflections on Several Iterations

learner-defined pathways >

Fostering Learner Agency in a Digital Literacies Course in Egypt: Reflections on Several Iterations

learning agency >

How Can We Green Our Learning?

learning leader >

So, You Want to Do Heutagogy: Principles and Practice

learning literacy >

Yeah, Sure! Developing My Own Learning Agency (A Craft of Learning?)

Libraries >

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Lifelong Learning >

Heutagogy and Work

The Pedagogy of Learner Agency

LMOOC >

Learner Agency in Distance Education Settings: Understanding Language MOOC Learners' Heutagogical attributes

MOOC >

Conceptualising and Designing Self-Mapped Learning Pathways Courses to Encourage Learner Agency and Equity

Neuroscience >

So, You Want to Do Heutagogy: Principles and Practice

The Pedagogy of Learner Agency

Novice researchers >

Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

Online Learning Ecology >

Learner Agency and the Learner-Centred Theories for Online Networked Learning and Learning Ecologies

online networked learning >

Learner Agency and the Learner-Centred Theories for Online Networked Learning and Learning Ecologies

Padagogy Wheel >

Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

PAH continuum >

So, You Want to Do Heutagogy: Principles and Practice

Participation >

Learner Agency and Architectures of Participation

Pedagogy of Agency >

The Pedagogy of Learner Agency

pedagogy of choice >

Supporting Learner Agency Using the Pedagogy of Choice

pedagogy of oppression >

The Pedagogy of Learner Agency

PhD candidates >

Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

positive relationships >

Help Me Put on This Jetpack: Propelling Learner Agency at Learnlife Barcelona

problem-based learning (PBL) >

Supporting Learner Agency Using the Pedagogy of Choice

Program design >

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reflections >

Reflections of Heutagogy and Learner Agency

Reflective Practice >

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research training >

Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

researcher education >

Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

rhizomatic learning >

Learner Agency and the Learner-Centred Theories for Online Networked Learning and Learning Ecologies

self-assessment >

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Self-Confidence >

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Self-Determination Theory >

Help Me Put on This Jetpack: Propelling Learner Agency at Learnlife Barcelona

Heutagogy and Work

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Self-efficacy >

Learner Agency in Distance Education Settings: Understanding Language MOOC Learners' Heutagogical attributes

self-management >

Help Me Put on This Jetpack: Propelling Learner Agency at Learnlife Barcelona

Self-Mapped Learning Pathways >

Conceptualising and Designing Self-Mapped Learning Pathways Courses to Encourage Learner Agency and Equity

Social Justice >

The Pedagogy of Learner Agency

South Africa >

Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

Technology >

Conceptualising and Designing Self-Mapped Learning Pathways Courses to Encourage Learner Agency and Equity

TPACK >

Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

Transformational Learning >

Transformative Teaching and Heutagogy

Ungrading >

Fostering Learner Agency in a Digital Literacies Course in Egypt: Reflections on Several Iterations



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Chapter 1

The Pedagogy of Learner Agency

Stewart Hase & Lisa Marie Blaschke

Lifelong Learning

Social Justice

Pedagogy of Agency

pedagogy of oppression

Heutagogy

Neuroscience

In this chapter, we will describe the concept of agency and why it is vitally important to learning both from an educational context and from the point of view of the social good. This is a timely discussion given the problems we have in a world that has difficulty separating fact from fiction and in interpreting information, and in a world where lifelong learning is a critical skill. We then discuss heutagogy (self-determined learning) aligning it with the concept of learner agency and positioning heutagogy as a pedagogy of agency.

Introduction

The power of education extends beyond the development of skills we need for economic success. It can contribute to nation-building and reconciliation.

— Nelson Mandela, 1997

This book consists of descriptions of how educators from across the world have sought to increase learner agency in their practice in formal and informal settings. Most of them describe how they have empowered their learners by applying the principles of heutagogy or self-determined learning, which is directly underpinned by the notion of human agency and, more specifically, learner agency. In Chapter 2 of this book we will look at the principles and practice of heutagogy, the theories on which it is built, and the considerable literature that has arisen since the first paper described it in 2000 (Hase & Kenyon, 2000).

Our focus in this book is, clearly, on educational practice. So, we thought that it might be important to discuss, in this chapter, what we see as the much broader significance of enhancing learner agency to society in general or as Dewey (1927) described as the 'Great Community'. We look at how our choice, as educators, in our practice and how wider educational policy can make a difference not only to the lives of people but also the greater good in preparing citizens for the challenges of the 21st century.

Oppression and emancipation in education

In the *Pedagogy of the Oppressed*, Paulo Freire (1970) describes how education can be used as a means to oppress the individual voice in society. In its simplest sense, this oppression starts with the system and the teacher – by virtue of the curriculum having power over the dispensation of knowledge, what is to be allowed to be taught, and what pearls might be thrown before the masses. At a time when there were few libraries (at least that the public could access) and

no Internet, the control over content was strictly in the hands of the teacher. A pedagogy of oppression has also required that the student is told what and how to think with respect to values, attitudes, and beliefs, the very heart of what determines the uniqueness of the individual.

Freire (1970) also points out that when the student is a passive recipient of education with no say in process or content, then agency is removed. This is central to the notion of oppression. At the very least, education can be a conservative enterprise that is more concerned with channelling the status quo than a creative, liberal enterprise likely to foster change. With the advent of mass education, education was purposed to feed factories with skilled labour during the industrial revolution, and this idea of education has not changed much since that time. At its worst, education can be used to foster totalitarian regimes, entrench a lifetime of dogma from which a person might never escape, and threaten the notion of a civil society by entrenching notions such as apartheid, racism, and human rights. It is no wonder that there is considerable political will in controlling education in every country in the world. A thinking, discerning population is a dangerous thing to those who would seek to oppress the masses.

Education can also be emancipatory. Education can free people and enable them to make sense of their world in their own terms rather than as directed by others. It can be used to foster agency in which the individual is able to construct his or her own meaning through experience as Freire (1970), Vygotsky (1978), Piaget (1971), and Dewey (1938) imagined. There is vast literature that supports the notion that education can be a powerful force for change (e.g., Schuller et al, 2004; Welch et al, 2017) and can make a difference not just to the lives of individuals, but also to societies and communities. An educational system that promotes agency and uses a learner-centred pedagogy such as self-determined learning both facilitates emancipation and fosters change.^[1] In addition, by promoting agency, we enable the capacity of learners to contribute and engage within their social and cultural contexts (Archer, 2000).

In 2011, with Hase's paper on heutagogy and action learning and in 2012, with Blaschke's paper on lifelong learning, we began to see a shift in thinking towards how heutagogy can impact social issues through a change in educational pedagogy.

Constructivism has been one of the major theories underpinning heutagogy (e.g., Hase & Kenyon, 2000, 2007) from the start; however, the notion of agency didn't appear in the literature on heutagogy until 2014 (Hase, 2014). Even then, its extension to learner agency has always been the principal focus (e.g. Blaschke & Hase, 2019; Hase, 2016), given our interest in the educational context and in shifting from traditional pedagogy to heutagogy. Recently, and ambitiously perhaps, discussions about heutagogy have included the notion of free will and learner wandering (Glassner & Back, 2020; Shpeizer & Glassner, 2020). It is likely that agency and heutagogy is more closely related to Kant's notion of autonomy, in which the individual is seen as a rational being, capable of accepting responsibility for her or his decisions, practical and moral (Sensen, 2013).

South Africa is a prime example of educational oppression. Despite the massive political changes that have occurred since apartheid, learners continue to struggle with the idea of learner agency, with the freedom to express one's agency provoking a whole new process of re-learning after decades of control. However, there are indications that this may be slowly changing (Inefuku, 2017; Msila, 2014; Msila & Setlhako, 2012). Stewart saw the same phenomenon in the early 2000s when visiting the Czech Republic. Even though it had been many years since the country had left the Soviet Union, agency in general, and particularly in education, was not easily allowed or expressed.

Heutagogy allows learners to experience agency and as a result be freed from the stigma of oppression – if learners and educators are willing to embrace agency. This willingness to engage in agency places learners outside of their zone of proximal development (Vygotsky, 1978), requiring them to move away from oppression and toward individual responsibility and self-regulation of their learning. In writing about the learner experience of 'doing' heutagogy for the first time, Barbara Brandt (2013) shares how not having close direction or a formula for learning and instead having the freedom to chart her own learning course was extremely challenging. However, once she became more self-determined in her learning, Brandt found it even more challenging to return to teacher-centred learning.

Oppression doesn't have to be violent. It can be a subtle, quiet voice, appearing in the guise of a gently paternalistic friend, one who is there to guide us and to ensure we stay systematically on track and don't begin exploring the "wrong" ideas. We become passive, accepting, and unquestioning. From an educational perspective, the teacher "teaches", serving as a funnel that pours knowledge into the minds of learners. By enabling agency, however, we invoke the learner ability to accept responsibility, take control of and make choices in learning, and to see how those choices impact the world. Learner agency means making sense of the world for oneself by actively engaging with resources and experience and taking responsibility of learning. We'll now turn to the topic of agency and how heutagogy reveals itself as the pedagogy of agency through its principles and application.

Heutagogy as the pedagogy of agency

According to Bandura (2009), human agency is, "the human capability to exert influence over one's functioning and the course of events by one's actions" (p. 8). Thus, human action is intentional, rather than the result of fate or other external influences. The importance of this definition is that it is not self-evident. That is, the population is divided as to whether individual agency exists or not. There are those who believe that people do not have agency and that external influence is always at play, or that humans are born into their social and economic position, for example, with natural leaders and natural followers. From an educational point of view, there is a common-held belief that it is up to others (the educators) to make sense of the world for the learner and that knowledge is tightly held in the hands of the educator. *It is the pedagogy of the oppressed*. It is a belief that belongs to an era when information and knowledge was difficult to obtain, and codification was left in the hands of those who had access to that information and knowledge – initially religion and later the educational system. Freedom from this pedagogy of oppression thus requires a *pedagogy of agency*.

In their first paper on heutagogy, Hase and Kenyon (2000) address the philosophical debate that underpins the notion of agency and propose an approach that embraces learner agency:

Our educational systems have traditionally been based on Lockean assumptions which assume that the individual mind is a clean slate at birth, the world is a buzzing confusion, and that concepts and causal relations are inferred from associations of stimuli (Emery, 1974). In this paradigm learning has to be organised by others who make the appropriate associations and generalisations on behalf of the learner. Thus, random individual experiences are taken to be totally inadequate as sources of knowledge, the educational process needs disciplined students, and literacy is seen to precede knowledge acquisition. Success is based on attending to narrow stimuli presented by a teacher, an ability to remember that which is not understood, and repeated rehearsal (Emery, 1974, p.2). An alternate view is proposed by Heider and assumes that people can make sense of the world and generalise from their perceptions, can conceptualise, and can perceive invariance (Emery, 1974). Thus, people have the potential to learn continuously and in real time by interacting with their environment, they learn through their lifespan, can be led to ideas rather than be force fed the wisdom of others, and thereby they enhance their creativity, and re-learn how to learn.

If one takes the view that humans do not have agency, then it is going to be difficult to adopt a learning pedagogy that is learner-centred. If humans do not have agency, it is the teacher and the educational system that will dominate the learning experience. In a pedagogy of agency, however, the learner is at the centre of the learning experience and is given full responsibility for his or her learning, deciding what will be learned and how, which is in its essence the definition of *heutagogy*.

Heutagogy is the study of self-determined learning and applies a holistic approach to developing learner capabilities with the learner serving as, "the major agent in their own learning, which occurs, as a result of personal experience" (Hase and Kenyon, 2007, p. 112). Heutagogy presupposes agency and, more specifically learner agency, which is the capacity of learners to take responsibility for and to direct and determine their own learning paths (Blaschke & Hase, 2019; Hase, 2014, 2016). According to heutagogy, the learner learns at a time determined by the learner, not by the teacher. Heutagogy "...suggests that learning is an extremely complex process that occurs within the learner, is unobserved and is not tied in some magical way to the curriculum. Learning is associated with making new linkages in

the brain involving ideas, emotions, and experience that leads to new understanding about self or the world. Thus, learning occurs in random and chaotic ways and is a response to personal need and, often, occurs to resolve some ambiguity.” (Hase, 2011, p. 2).

The principles of heutagogy were built upon theories that advocate learner agency through learner-centred learning. These theories include capability (Stephenson, 1996; Stephenson & Weil, 1992), self-efficacy (Bandura, 1977, 2001), systems thinking (Emery & Trist, 1965), double loop and organisational learning (Argyris & Schön, 1996), andragogy (Knowles, 1975), learner managed learning (Graves, 1993; Long, 1990), action learning (Kemmis & McTaggart, 1998), and work-based learning (Gattegno, 1996; Hase, 1998). By giving the learner choice in determining his or her learning path, heutagogy supports the development of the learner’s self-efficacy and capability through exploration and problem-solving, as well as promotes their ability to think and reflect critically and to learn autonomously.

Non-linear learning, another central principle to heutagogy, further enables agency in the learning process. Hase and Kenyon (2000) noted that the time was right to shift from a teacher-centred approach to a learner centred approach because of the liberation of information through the Internet. This was a little generous because there were many educators, the originators of heutagogy who, were embracing the ideas of Rogers and phenomenology (1961) and constructivism (Vygotsky, 1978) long before the Internet and that were concerned with what became known as learner-managed learning (Graves, 1993; Long, 1990). Connectivism (Siemens, 2004) and rhizomatic learning (Cormier, 2008) are more recent developments that share some of the assumptions of the heutagogic approach (see Chapter 3). Anderson (2010) describes these as net-aware pedagogies that take advantage of the affordances of online environments. As we shall see in Chapter 2, mobile and other communications technology have been eagerly embraced as a means to enabling agency among learners in terms of accessing information and in the learning process.

All new theories are built on the shoulders of giants and heutagogy is no exception. Thus, heutagogy has drawn from a number of theories of learning, all of which embrace the idea of human agency, in some form or other. We hope we have done the originators of these theories justice in attempting to bring them together in developing a pedagogy of agency.

Conclusion

If we are to avert the dangers of a pedagogy of oppression for learners and for society in general, it is of critical importance that we support and promote learner agency within our ‘classrooms’, no matter their form. In this chapter, we have proposed heutagogy as a pedagogy of agency, one which promotes independent thinking and learning and emancipates our learners from passive consumption – and acceptance – of information and ideologies. As a pedagogy of agency, heutagogy not only gives learners an opportunity to regain their voices within education, but also enables them to become innovative, creative, and autonomous thinkers and change makers in society as a whole. Examples in this book demonstrate the opportunities for realising agency in a variety of educational contexts.

We conclude with a paragraph from Blaschke and Hase (2015) – a call for action and change by adopting self-determined learning within our current educational systems:

Change is no longer an exception in the current world we inhabit. It is the normal state and is discontinuous. The ability to learn, for both individuals and institutions, is critical to survival. While it has always been so, adaptation in the past could comfortably take place over a long period of time. Now, that is no longer possible. And we have the tools to be able to learn quickly and effectively: whenever and wherever we are. What needs to happen now is a concomitant shift in our thinking about educational and training systems that keeps pace with both the need to learn effectively and the technology that enables it. This change in our cognitive schema about how we learn needs to become based on the readily available science that tells us clearly about how people learn best rather than outdated models that were built for the industrial revolution. Learners, learning practitioners, policy makers and politicians, and managers of organizations need to be prepared to use this science and to adjust their thinking about learning in the twenty-first century. Heutagogy, or self-determined learning, provides them with a framework to think about learning in a revolutionary way (p 75).

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[1] The political dimension of this concept will not be discussed but will be left as the elephant in the room, that is, the difference in the viewing of agency between those who populate the right side of politics compared to those on the left. There is no doubt that our position here as advocates of agency, and opposed to oppression, may be seen as coming from the left.



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Chapter 2

So, You Want to Do Heutagogy: Principles and Practice

Lisa Marie Blaschke & Stewart Hase

Design

Neuroscience

heutagogy principles

PAH continuum

learning leader

In this chapter we explore the practical application of heutagogy. It begins by looking at some of the literature describing how heutagogy has been used in various contexts. We also examine the concept of the learning leader and what attributes they need to have in order to use heutagogy. The learner also needs to be prepared to adopt a heutagogic approach and we view this through the lens of the Pedagogy-Andragogy-Heutagogy (PAH) continuum. Finally, a number of suggestions are made about how agency may be applied.

The heart of heutagogy

In the three years before the concept of heutagogy was derived (Hase & Kenyon, 2000), Chris Kenyon and Stewart Hase had been working together delivering a postgraduate program in an Australian university to members of the Royal Australian Airforce. Participants were changing roles from operational positions to organisational development consultants. Chris and Stewart had been involved in education for many years and shared a common view about how people learn best, most of which is described in Chapter 1. They were interested in developing people fit for the environment in which they were going to work. Experience in the world is largely non-linear, unpredictable and so is learning, but most curricula are linear and not suited for learning in workplaces (Hase, 2009).

Chris and Stewart designed a course that placed the learner at the centre of the learning process, as full partners in designing their own learning. This is at the heart of heutagogy. Of course, there were fixed outcomes to be achieved and certain essential content, but we wanted to engage the learner in doing three things. First, they gave their learners the detailed curriculum, complete with the minimum learning outcomes that needed to be achieved. They also provided suggestions for learning activities, projects and assessment, but these were all negotiable.

Second, they encouraged learners to go as far as they wanted in exploring things that interested them. This involved designing activities that encouraged research and increasing scope to explore particular topics. More importantly, they wanted participants to come up with novel ideas and approaches to whatever it was that they were researching. For example, the flipped classroom approach provided a forum for discussion, feedback and appraisal. Every learner had the responsibility to help develop the other as well as learn from them. Chris and Stewart used a lot of experiential learning in which they accessed emotions to motivate and embed learning. Project-based learning was a major learning process that was also negotiable. As much as possible, scaffolding was avoided so that many parts of the curriculum could be melded together in a project and not seen as sequential. Thus, didactic teaching was avoided completely,

enabling the learner to use the resources available to them on the Internet, in the library and by talking to experts in the field.

Third, the learners designed, in consultation with them, their own assessment. The assessment was formative rather than summative, aiming to be a learning experience rather than a challenge. Thus, assessment was chunked and associated with learning activities. So, Chris and Stewart were interested in developing people as capable learners, as well as capable practitioners – the two being seen as interrelated. The aim of enabling learners to engage in areas of interest to them was also at the front of negotiated assessment, while not losing the achievement of important outcomes.

Finally, Chris and Stewart focused on self-reflection as a central part of learning with the aim of developing lifelong learners as a part of being professional practitioners. Successful self-reflection is an important skill and it was treated as a developmental process, using group and individual activities to increase self-efficacy and capability.

It was from these humble beginnings that the concept of heutagogy was derived as an extension to andragogy, and antithetical to pedagogy (Hase & Kenyon, 2000). Since that early foray into applying their ideas, large numbers of educators around the world have been prepared to experiment with heutagogy and add to its body of knowledge.

One result of these experiments has been the identification of five main principles underpinning heutagogy (Blaschke & Hase, 2015, 2019; McAuliffe et al, 2011). These are:

- **Learner agency:** The fundamental, central principle of heutagogy is learner agency, where the student is the primary agent of his or her learning, with the learner making decisions about learning, from what will be learned and how, to whether learning has been achieved and to what degree (e.g., self-assessment).
- **Self-efficacy and capability:** Also central to the theory are the principles of 1) self-efficacy, which is the learner's belief in his or her own abilities, and 2) capability, which is the ability of the learner to demonstrate an acquired competency or skill in new and unique environments; the resultant experience of both has the potential to create transformational learning.
- **Metacognition and reflection:** Reflecting upon and critically thinking about what has been learned and the process of learning, in the form of double-loop learning (metacognition), is another principle of heutagogy.
- **Non-linear learning:** The learning path is directed by the learner, and is not pre-defined or sequential, as the learner is responsible for identifying what will be learned and how. As a result, this path can often be chaotic and divergent – much like learning in connectivist and rhizomatic learning environments.
- **Learning how to learn:** While this is partly inherent in the other principles, McAuliffe et al (2011) single out this factor as a key principle of heutagogy.

Towards an evidence-based practice

Heutagogy was built on the shoulders of giants in areas such as constructivism, humanism, capability, systems thinking, and action learning and this has been described extensively elsewhere (e.g. Hase & Kenyon, 2000, 2007; Hase, 2016) and is outlined in Chapter 1 of this book. Since that time, the principles and practice of heutagogy have expanded and refined considerably as more knowledge about how we learn have come to light and people have experimented with self-determined learning and learner agency. In particular, connectivism and rhizomatic learning are consistent with heutagogy (see Chapter 4 for a detailed discussion). In addition, recent advancements in the field of neuroscience have provided some support for heutagogic approaches.

Neuroscience and heutagogy

Heutagogy draws on recent advances in neuroscience, which provides us with a scientific basis for understanding how people learn. Imaging technology has advanced in recent years so that it is possible to study the anatomy of the brain in considerable detail. In addition, it has been possible to watch the brain in action when people are thinking, experiencing

emotions, and behaving. There is not enough space here to go into the full details of the neuroscience of learning, so we have included a summary of some of the interesting neuroscience research that underpins our understanding of how people learn

All brains are different, and our approach to learning is individualistic

People, even small children, come to learning encounters with different experiences, interests and motivations and each with a unique perspective on new information, skills, and experiences. The role of memory and the laying down of new pathways and associations with old learning, and previous experience (memory) is highly individualistic (Benfenati, 2007; Khaneman, 2011). Information might result in quite complex cognitive leaps, thus creating changes in behaviour and new questions arising in the face of new complexities (Jung-Beeman et al, 2004). Thus, learning involves, "...a process of organizing and reorganizing one's own subjective world of experience, involving the simultaneous revision, reorganization and reinterpretation of past, present and projected actions and conceptions" (Sumara & Davis, 1997, p. 107).

With this in mind, learning cannot be a one-size-fits-all undertaking. Given what we know about how people learn, personalising the learning experience and supporting exploration and hypothesis building and then testing enables the individual brain rather than constraining or confuse it.

The changing brain

The brain is incredibly plastic and changes dramatically, depending on where a person is concentrating his or her attention (Swartz et al, 2005). If we use one part of the brain more than another, say by playing the guitar for example, then those parts of the brain responsible for left- and right-hand fine movements become denser with neurons. The more we use a particular part of our brain, the more it develops through the release of chemicals called neurotrophins (Willis, 2006). Brain plasticity research (Doidge, 2007) shows that highly focused techniques targeted at specific areas of the brain can assist learning. In addition, our motivation to learn is also innate and linked to survival, which might explain why we are good at learning from the beginning of life. Humans are pattern seekers, and there is no way of knowing what these patterns look like when they are formed except by observing behaviour.

As pattern seekers, we attempt to make sense of our environment (Sousa, 2011). Survival is dependent on being able to attend to relevant stimuli in our environment, generate and test hypotheses, create patterns, and then act on this processing. Learners who can establish relevancy through context building are more likely to focus and seek patterns. It has also been shown that arousal (attention and motivation) seems to change neural engagement that is associated with learning (Hennig et al, 2021). Thus, learners who are allowed to choose their own educational path based on need and passion, would be more focused and effective in the learning process

It also appears that working with others is a stimulus that can enhance creativity (Fink et al, 2010). Being exposed to the ideas of others acts as a cognitive stimulant by activating neural networks and creating original ideas.

Emotions and hormones

Emotions and hormones play a vital role in learning, memory, and decision-making (Damasio, 2003; Immordino-Yang & Damasio, 2007, Ingleton, 1999), particularly dopamine. The more satisfying, engaging, and exciting the education process, the more internally reinforcing it is to the learner through the release of dopamine (Willis, 2006). When people solve a problem themselves, they release a host of neurotransmitters such as adrenaline and dopamine in the brain, which create a sense of excitement (Stahl, 2002). Asking questions relevant to the learner has the same effect, which Socrates presumably knew well, although intuitively rather than from brain science. Dopamine has also been shown to be enhance encoding and recall from memory (McNamara et al., 2014), which are critical to learning.

The amygdala, which is central to driving emotions, is connected to areas of the cortex responsible for higher order cognitive functions and learning. Thus, emotions affect learning, as they do analysis, decision-making, and action. Den Ouden et al (2013) demonstrated that dopamine, the hormone that increases pleasure (Cools et al., 2009), reinforces learning in the long term, while serotonin secretion, which is involved with negative reinforcement, enhances learning

only in the short term. Thus, we are more likely to engage with learning that we care about and is relevant to us (Immordino-Yang, 2016).

Persuasion has the opposite effect, releasing hormones that increase resistance (Sagarin et al, 2002; Tormala & Petty, 2002). This will lead us to the conclusion that if learners are given agency to choose their own learning path according to individual passion and need (intrinsic motivation) and to engage in active exploration and problem-solving, learning would be a more pleasurable and longer lasting experience.

Applications of heutagogy

This book contains a number of examples of applications of heutagogy, specifically in promoting and developing learner agency within multiple settings. Below is an indicative, rather than exhaustive, list of of this literature including examples from this book and past research across multiple disciplines (Table 1).

Table 1

Applications of heutagogy

Discipline	In this book	Examples from the literature
K-12 Education	Carberry (2021, Chapter 8); Ecclesfield, Bhanu Kote, and Ecclesfield (2021, Chapter 12); Kaplan, Bar-Tov, Glassner, and Back (2021, Chapter 11)	Andrews (2014); Akyildiz (2019); Canning (2013)
Higher Education	Bali, el Ahwal, Hashad, Fahmy, and Hussein (2021, Chapter 5); Collis (2021, Chapter 14); Crosslin (2021, Chapter 6); Margarit (2021; Chapter 15); Setlhakoo (2021, Chapter 13)	Bul, 2014; Canning (2010); Canning and Callan (2021); Halsall, Powell and Snowden (2016); Richardson, McGowan, and Styger (2017); Snowden and Halsall (2017)
Caring Sciences		Maykut et al (2019)
Engineering		Gazi (2014); Mohammad et al (2019)
Nursing		Albers, (2016); Cordon, (2015); Hurley and Neilson (2013); Canning and Callan (2010); Cordon (2015) Green, and Schlairet (2017); Macdiarmid, Winnington, Cochrane, and Merrick (2021); Schlairet, Green, and Benton (2014)
Entrepreneurship	Garnett (2021, Chapter 16)	Barton (2012); Jones et al (2019)
Journalism		Narayan, Herrington, and Cochrane (2019)
Teacher education	O'Brien and Reale (2020, Chapter 7)	Akyildiz (2019); Ashton and Elliott (2007); Ashton and Newman (2006); Ceylan (2020); Glassner (2019); Hexom and Marlaire (2013); Jaakkola

Discipline	In this book	Examples from the literature
		(2015); Kung-Tech et al, (2019); Northcote and Boddey (2014); Preece and Hamed (2020)
Medical education		Abraham and Komattil (2017); Chacko (2018)
Computer science		Mann et al (2017); Oprean et al (2010)
Mathematics		Mohd Tajudin, Ashikin Suhaimi, Adnan, and Puteh (2020)
Massive open online courses (MOOCS)	Agonács and Matos (2021, Chapter 9)	Anders (2015); Agonács and Matos (2017)
Underprivileged environments		Nkuyubwatsi and English (2016); Kanwar et al (2014)
Theology		Oliver (2016)
Work-based learning	Hase (2021, Chapter 10)	Barton (2012); Hexom and Marlaire (2013); O'Brien et al. (in press); Ridden (2014); Willmott and Barry (2002)
Flexible assessment		Booth (2014); Eberle and Childress (2009); Oliver (2015)
Postgraduate education		Chişiu, (2018); Gregory et al (2018); Tay and Hase (2004); Kenyon and Hase (2010); Tay and Hase (2010)

Since learning in a digital environment has become very popular in recent years, and no less so, given the COVID-19 pandemic in 2020-21, we have provided a summary of some of the research in the area in Table 2.

Table 2

Heutagogy and digital media

Digital Media	Examples from the Literature
Mobile devices and online communities of practice	Cochrane et al. (2014); Cochran and Bateman (2010); Cochrane and Narayan (2013); Gerstein (2013); Narayan and Herrington (2014); Narayan, et al (2017). Price (2014); Narayan, Herrington and Cochrane (2019)
Twitter, blogs, and GoogleDocs	Blaschke (2014b); Chawinga (2017); Junco, Heiberger, and Loken (2010); Wong, Abdullah, and Hamdan, (2020)

Digital Media	Examples from the Literature
Personal learning environments	Hayworth (2016); Hicks and Sinkinson (2015); Mann et al (2018).
Online portfolios and learning journals	Blaschke (2014a); Blaschke and Brindley (2011); Blaschke and Marin (2020)

Later, we look at some ways that you might be able to use heutagogical methods in your learning programs, derived from the literature summarised above. But before we do this let's look at what it takes to implement heutagogy from the perspective of the 'teacher' or who we prefer to call, the learning leader. Then, we'll look at the perspective of the learner who learns within a heutagogic framework.

The learning leader

It should be evident from what you've read so far that an educator wanting to implement heutagogy is going to need to have a particular set of beliefs and attitudes about learning and people. To accept that people have agency means being able to see the learner as central to the learning process rather than the teacher. Be able to resist the urge to teach is a challenge, as traditionally, the teacher is considered the guru or sage-on-the stage (King, 1993) believing that, 'if I don't explain it then the student will not understand'. Instead, the teacher needs to become a guide-on-the-side (King, 1993). It is a question of relinquishing control and being partner with learners in designing their learning, in meeting the curriculum outcomes, and in enabling them to explore and expand the boundaries of their learning.

Hase (2014) proposed a number of attributes and skills that were required for a learning leader using heutagogy. These are shown in Table 3 below.

Table 3

The Learning leader framework/categories (Hase, 2014, pp. 100-101)

Category	Attributes	Skills
The capacity to accept and manage ambiguity	Low need for control Openness to experience * Moderate on perfectionism scale * High stability and low anxiety * Capability NB *Some of "The Big 5 Personality Traits"	Project management Ability to use social media
The ability to foster engagement	Empathy	Interpersonal effectiveness

Category	Attributes	Skills
	Optimism	Ability to self-regulate
	Flexibility to change approaches as circumstances change	Understanding of how to motivate others
		Ability to foster a shared purpose and vision
		Maintaining direction
		Fostering the joy and rewards of learning
The capacity to learn	Willingness to change own ideas and beliefs	Ability to research and learn Being thoroughly on top of one's subject areas Having wide and accessible networks Ability to share openly with others Knowledge management skills The ability to foster collaborative learning Ability to apply learning and knowledge (practical skills)
The ability to use open systems thinking	Willingness to empower others	Capacity to frequently scan the external environment and respond to changes Ability to foster participative democracy/collaboration decision-making processes Capacity to work in a team as both leader and as a member Ongoing internal and external analysis of effectiveness (continuous improvement) The ability to filter information (research skills)

The attributes and skills presented here are underpinned by a belief in learner agency and are as much about the relationship between the learner and the learning leader as it is about practical skills.

The readiness of the learner

As well as the learning leader needing to be ready, so must the learner. Hase (2016) argues that humans are born hard-wired to learn, but upon entering the formal school system, they learn to become passive learners. Research by Glassner and Back (2020) and Andrews (2014) further supports this argument and indicates that school children can be self-determined learners when given the opportunity – and can actually transition more quickly to this form of learning than their teachers. The stories shared within this book (Carberry, Chapter 8, & Kaplan et al, Chapter 11) further support these findings.

As we mentioned in Chapter 1, humans are hard wired to learn from the moment they are born by exploring, developing hypotheses about how the world works and then testing them out, failing, watching others, building knowledge and skills, and generally seeking patterns and identifying exceptions: it is both a reactive and a proactive world. It is later that – aided and abetted by schools, gurus, and other adult figures – the child starts to doubt their observations. Teaching, and especially traditional, didactic methods, interpret the world on behalf of us, and remove agency.

Learner skills are never lost, however, despite the best efforts of rigid, teacher-centred school and higher education curricula. If you ask a group of teenagers or adults how they learn when taking up a hobby or new interest, they will tell you that they search the Internet, watch YouTube and TED Talk videos, talk to or watch experts, maybe enrol in a class, experiment, fail, mess around, and test out ideas, even innovate. People know how to learn. But when they enrol in a course, particularly one that is accredited, they give over control to the ‘teacher’, the curriculum. They become passive rather than remain in their natural state as an active learner.

The pedagogy-andragogy-heutagogy (PAH) continuum

What of those learners who have become accustomed to a more passive, teacher-led, learning experience and find it difficult to transition to a full-on self-determined approach? How can we support students in engaging in more active learning and embracing their agency?

One instructional approach to supporting this “unlearning” process is the pedagogy-andragogy-heutagogy (PAH) continuum. Luckin et al (2010) described how learners can shift from traditional pedagogical learning, transitioning through andragogical (self-directed learning) approaches to finally become heutagogic or self-determined learners. They termed this transition the pedagogy-andragogy-heutagogy or PAH continuum. Using this approach, teachers guide their students from passive to more active learning and toward taking more responsibility in directing their learning. For example, Garnett (2013), an expert on the Beatles, described how, initially, the Beatles were influenced by artists such as Chuck Berry (among many others), which was evident in the Beatles’ rock and roll style. He described this as their pedagogy phase. When it came to their Revolver album, Garnett describes how the Beatles started to apply learning obtained from their experience and other influences: this was andragogical learning. Garnett says that we see heutagogy in action with the Beatles’ Sergeant Pepper’s Lonely Hearts Club Band album as the group were able to be full agents in their own learning by exploring and experimenting with their music.

Embracing one’s own agency is not without its challenges, as it requires learners to take more responsibility for their learning. As a student in an online learning environment, Brandt (2013) described the difficulties of adapting to a heutagogic approach, which included frustration with moving out of one’s comfort zone. Although she initially struggled with the approach, once Brandt adapted to being self-determined in her learning, she found that she enjoyed the freedom to learn independently. Moreover, she did not want to return to the more traditional pedagogic methods in subsequent courses where teachers did not support heutagogy. This finding is similar to that of Wark (2018) in her research exploring incorporation of emerging technology into the classroom and learner self-determined learning, and also Blaschke (2014a) when incorporating self-determined learning in a graduate program.

Similarly, Msilav and Setlhako (2012) have found that that they needed to nurture students and help them become more active learners in order for them to make the transition from familiar passive forms of learning to self-determined learning. Cochrane and Narayan (2014) found that students needed to be motivated to use digital technology in self-determined learning environments and required support and guidance from instructors during the process. Tay and Hase (2013) showed how they observed doctoral candidates going through the three stages of the PAH continuum while undertaking research using an action research, which was unfamiliar to them. Price (2014) and Andrews (2014) reported a similar experience in school education as students became more independent learners through the support of their teachers. Becoming a lifelong learner might involve the same transition through the PAH continuum with an increase in self-efficacy and competence (Blaschke, 2012, 2019).

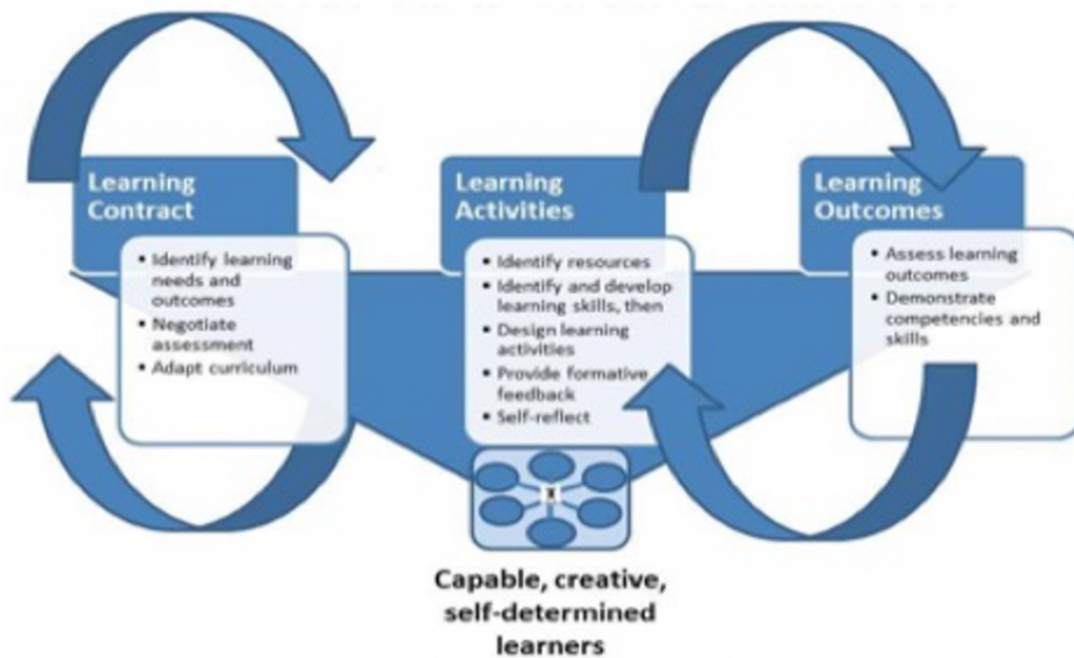
The PAH continuum is a form of scaffolding, but it is aimed more at releasing the inherent agency in those who have become passive learners, rather than increasing conceptual complexity. It has been described in relation to using technology supported personal learning environments (PLEs) to develop self-determined and lifelong learners (Blaschke, 2019), in the use of digital learning networks (Blaschke & Hase, 2019), and in using mobile and social media to help learners become more self-determined learners (Narayan, Herrington and Cochrane, 2019).

Heutagogic design

Designing a heutagogic learning experience is a dynamic process that incorporates feedback loops which enable the learner and the learning leader to modify content and the learning process as the learner identifies new needs, new learning. (See Figure 1 below).

Figure 1

Heutagogy Design (Blaschke and Hase, 2015)



Narayan, Herrington and Cochrane (2019) used design-based research in a journalism course to explore heutagogic design elements using digital and social media tools, and discovered these key elements:

1. Design learning activities, tasks and a learning environment that encourage elements of learner participation, personalisation and productivity underpinned by the affordances of mobile and social media tools.
 2. Facilitate learning using tools that are open, platform independent and learner-owned.
 3. Situate learning in authentic contexts chosen by the learner to enable exploration and experimentation.
 4. Design formative assessment events that encourage learner participation and reflection in authentic contexts to inform the process of learning to be.
 5. Provide technological support and pedagogical modelling of the use of the mobile and social media tools.
- (Narayan, Herrington & Cochrane, 2019, p. 99).

It is important to set expectations right from the start. That might mean telling the learner that your approach may be a little different and spelling out what you expect from the learner and what they can expect from you. Using the guide-on-the-side approach is easy to understand. You might explain that there will be no lectures in your course or presentation, that meetings will be discussions in which learners will ask the questions or be asked to participate in some way. You will point out that you have provided all the resources needed to complete the course and achieve the outcomes, which you then present to the learners. The main aim is to increase the confidence of the learners in the process and in their ability to achieve course outcomes.

You will explain your role as a guide on the side: that you are available to receive questions and to engage in conversations about the subject material using whatever forum is available. It can be useful to suggest to learners that they are effective learners and that the learning material provides everything they need, but that you are there to make sure that outcomes are achieved.

Heutagogic methodologies

The methodologies that can be used to design a heutagogic learning experience are not hierarchical or prescriptive. Moreover, the learning leader needs to adapt whatever methods are available to their own needs and the needs of the learner. Each learning experience is different. In this section, we provide only a brief note on each methodology, leaving the reader to interpret and adapt to their own experience and practice^[1].

Negotiated learning

We've made the point in this chapter that the learner is at the centre of heutagogy. Learners need to be able to negotiate the learning process and content, depending on what learners want to explore and how they want to reach learning outcomes. One way of facilitating this process is to have the learner review her or his unique context. So, while there may be some minimal outcomes, the learner should be able to expand upon these to meet personal needs. Where possible, the outcomes can be flexible to facilitate personal context.

One way of organising a course (formal or informal) is around the personal learning needs of the learner. When conducting a leadership course, for example, you could ask the learner to identify their personal leadership challenges and design it around those. In short, make the learning relevant to the learner.

Context

Enabling the learner to explore how they will apply the learning to their own context is critical to heutagogy. Learners do not enter into or leave a learning experience as a blank slate. Rather, they bring with them previous experiences, and they will take the learning from those experiences and apply it to new experiences. It is not that the learning leader needs to know each learner context, which can be impossible given the number of learners in a learning setting. However, the learner can be encouraged to discover how some phenomenon that is being studied makes sense to them.

Learning resources

Ensuring that the learner can access appropriate learning resources is key to any heutagogic learning experience. The provided resources are not intended to be exhaustive; rather they should be adequate and indicative, so that learners can explore further as part of learning to be an effective researcher. If we choose to apply the PAH continuum, then the resources you provided may be relatively comprehensive at the start but will taper off as the learner pursues their own interest.

In fact, a major component of a heutagogic approach is that the learner is encouraged to discover their own resources as part of their learning journey. A key skill in this information rich world is that of critical thinking and evaluation, where learners are able to sort the wheat from the chaff, fact from fiction, and how to ask the right kind of questions.

Collaborative learning

Learners learn from each other, so the learning leader needs to be able to establish a means of communication amongst learners either face-to-face or using mobile technology, or both. Joint projects, complex questions in which you indicate that discussion needs to take place, flipped classroom, reflection with feedback, and negotiated learning provide opportunities for collaboration.

Questioning

As Eugene Ionesco said, *"It is not the answer that enlightens, but the question."* (1969, pp. 35–36)

The provision of information involves telling. We are doing that right now. But it is not until the learner applies learning or thinks about it within a novel context that real learning occurs. So, an important skill for the heutagogue is the skilled design and asking of questions. The questions should not concern content, since these are more likely to be statements masquerading as questions. Instead, questions should encourage exploration, reflection, insight, and creativity.

Negotiated assessment

The design of assessment that provides the learner with the freedom to assign context, explore beyond the outcomes, to be creative, to innovate and to demonstrate capability is an important skill and a departure from providing standardised assessments. When it comes to demonstrating competency, this needs to be seen as the minimum standard. What we want to encourage is the demonstration of capability, the use of competencies in novel situations rather than just the familiar

Project-based learning

Projects can be as simple and as complex as the learning leader and the learner wish. One project I witnessed in a school involved the purchase of a shipping container which the class turned into a classroom and then shipped overseas to a needy country. This project involved multiple aspects of the curriculum such as mathematics, business, English, geography, politics and social science, for example. Learners are involved in every aspect of the project, including thinking of a useful project, design and planning.

Portfolios and learning journals

Portfolios and journals can be used as a part of assessment or can be a learning strategy in their own right. Here we are encouraging the learner to become more aware of their learning, areas to be explored, to be reflective and to manage their own learning.

Flipped classroom

We've discussed the flipped classroom previously. It is a powerful approach to having learners do their own research and have to present it to their peers. The learners take control of the curriculum, in a sense, by presenting selected parts of it to their colleagues and then reflecting on it together to identify personal meaning.

Action learning/research

Action learning and action research are related ideas that fit well within a heutagogic framework. They are both emergent activities and reflect agency. Action Learning provides a process of Plan, Act, Reflect and then Plan again that is particularly useful as a reflective process in learning.

Reflection

Reflection is central to heutagogy as a major way in which we learn. It provides an opportunity for not only simple learning but also double loop learning and metacognition. Reflection can be an individual or a group activity and accompany almost any other learning activity.

Conclusion

This chapter has presented the central principles of heutagogy, alignment of heutagogy with neuroscience research, and examples of applications of heutagogy within multiple disciplines and across multiple settings, from K-12 to higher education and vocational education, as well as within professional development and lifelong learning communities. Learner agency, the primary principle of heutagogy, is essential in order for learners to fully experience self-determined learning. Principles of self-efficacy and capability, reflection and metacognition, and non-linear learning are essential characteristics of any heutagogic learning setting, while learning to learn is a critical outcome for any self-determined learning experience. For a heutagogic learning experience to be truly realised, it must occur in an environment where learners not only have agency, but where there is also trust: trust of the teacher in the ability of students to be self-determined in their learning, trust in the teacher in themselves that they can be guides of students in their learning, and trust of the student in their ability to be self-determined learners and trust in their teachers to guide them in their learning.

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[1] A detailed description of methodologies that support self-determined learning can be found here: <https://learnlife.com/alliance/methodologies>





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Chapter 3

Yeah, Sure! Developing My Own Learning Agency (A Craft of Learning?)

Fred Garnett

Learner Agency

learning literacy

Having written a novel examining how I discovered my learning agency and my personal heutagogy, I thought my learning agency came from the choices I made as a teenager concerning music I listened to during the Sixties, starting with The Beatles, and the friends and conversations it engendered. Since then, I've examined more closely how I discovered learning agency and have realised there were many implicit contextual factors which were less about choice and more about circumstance. I identified three that happened when I was "accidentally" home-schooled. Firstly, my mother became a librarian when I was seven years old and for two years I had to read in a library for an extra hour a day. Secondly, my father undertook a teacher-training course when I was ten years old and used me to test textbooks designed for fifteen-year-olds. Thirdly, in the twelve-months before I started secondary school, my family lived in four different houses, and I went to three different schools, which encouraged me to take my own decisions on how to be responsible for my own learning. Cumulatively, it seems I had developed a personal "craft of learning" before I entered formalised secondary education and The Beatles arrived. This chapter explores my personal journey and the factors that have influenced my discovery of learning agency.

Towards a personal (self-determined) literacy

My father was in the British Army and my family were forever moving. When I arrived as a boarder at my eleventh and final school in 1967, Archbishop Holgates Grammar School in York (founded 1473), I was just 16 years old, and I had lived for 8 years in the UK and 8 years abroad. As a permanent outsider, and so never naturally a part of any local community, I always loved school, as it helped me fit in. Ironically, I would later become Head of Community Programmes for the UK Department of Education implementing interest-driven learning in digital community centres from 2000-05, which was how I discovered the concept of heutagogy. Wherever my latest school happened to be, I learnt how to become accepted by the new, local community by saying "yeah, sure" to whatever I was asked to do and engaging with whatever was valued there, from a mix derived from sport, culture, context and (sometimes) even learning. Surprisingly, it turned out that the criteria for successfully fitting in at any new school and community were always subtly different to my previous experiences. In the spring of 1958, when I was aged 7, we moved to a British Army Camp at Herford near Dortmund in Germany and, starting in the summer term, my younger brother and I were once again the new kids at yet another school – and to further complicate things, we had arrived at the wrong time of the school year.

The subtle difference in 1958 was that my Mum took over running the camp lending library as they were short of staff. I went to her library after school everyday before I could go home. Having done well at reading in my previous school in the UK as a six-year old, when the task was to read a very short book such as *Janet and John* within the time frame of a single class, I had a very limited view of what reading meant. With an extra 75 minutes available to me every day, I eventually discovered for myself what might be called long-form reading, where you return to the same book the following day and pick up the narrative wherever you have left off. I eventually discovered Scheherazade and the *1001 Nights*, which combined long-form and short-form storytelling in a thrilling and telling manner. As these daily visits to the library went on for well over two years, I became habituated to long-form reading and was always searching out books whose narrative would be patiently waiting for me to resume the following day. I learnt to judge a book by feeling the width, to mashup my metaphors.

I was developing my own reading literacy, which could also be described as a self-determined learning literacy, as I could read whatever I wanted to, within the range made available by the local library in a British Army Camp in the late 1950s, my choice wasn't being formally restricted. I didn't realise it then, but I had begun to understand "agency" in terms of choosing the books I wanted to read, rather than just reading books I was assigned to work through. My novel about heutagogy, *63/68 A Visceral History* (Garnett, 2018) was a first attempt to explain my personal heutagogy with a set of stories based on my learning experiences beyond the classroom. However, in the novel I linked my learning to the stimulus given to me by the Beatles, and all the wonderful pop music that we experienced in England in the Sixties. Between 1962 and 1972, I was an obsessive pop music fan and became extremely knowledgeable about everything related to pop, rock, psychedelic, underground, and progressive music (and belatedly jazz once I decided to become a drummer). This novelistic first attempt at reflecting upon and understanding my own experience might be more accurately defined as rhizomatic learning (Cormier, 2008). However, it does not address how I discovered my own learning agency' as Stewart Hase (Blaschke, Kenyon & Hase, 2014) calls it, which is slightly different to marking out a territory that I am interested in and becoming a very knowledgeable autodidact.

I now realise that I had become a "self-determined" learner before I heard *Please Please Me* by The Beatles in January 1963 and was influenced by the subsequent cultural influences that I document in the novel. My agency had more to do with constant change in my life context and forever being required to adapt to it with each new school. My first secondary school was not my second school but my ninth. My younger brother later said that he was terrified by this unending churn and turmoil. However, I had learnt to be adaptable and responsive, probably because my practice in dealing with change was a few schools ahead of him, and I offered up the version of me that best suited the new context. I learnt to present the version of me that the school demanded. This self-determined, yet random use of a library, which Rose Luckin (2010) would later describe as an "ecology of resources," would ultimately culminate in my rich and ripe use of "random walks" in the library at the University of Kent on my Masters degree in 1977 after I had been inspired by Paul Feyerabend's (1975) book *Against Method*, a book which could be more positively summarised as arguing that each of us should work out our own method, whilst also being confident in the method that we have learnt to devise for ourselves.

Towards a personal (self-determined) numeracy

Just as accidentally fortuitous for me in developing my own learning agency was a family move back to the UK from Germany in 1960. My father was assigned to a one-year teacher training course so he could learn how to teach the Army Certificate of Education to Army apprentices, as well as lower ranks wanting promotion. Whilst they would be tested on those ACE examinations from the age of 16 onwards, I was only nine years old that winter when my father started trying out the course materials on me. I was really lucky that he did. He tried a few different sets of materials, especially "programmed learning" books on military history, but the one that made a difference to my subsequent formal education was a marvelous large-size picture book called *Mathematics for the Million* by the brilliant Lancelot Hogben (1960). The book was designed as a self-study guide for the working-classes by a Professor of Mathematics at Cambridge University so that they could overthrow the British Establishment. However, although the Professor was a

Communist, the book was an approved British Army textbook and was considered the "Mathematics for Dummies" of its time.

What the book did brilliantly well was to illustrate mathematical concepts by using their practical application, a topic I formally studied later as Applied Mathematics at A-Level. Whether the materials were age-appropriate or not, they made sense to me as a 9-year old. I still remember being asked in a Mathematics class at grammar school about four years later if anyone knew the Pythagoras Theorem and being very surprised that I was the only one who raised my hand. On being asked what it was, I gave the well-known rubric, and also mentioned that it was used in building the Pyramids, which was how I recalled the formula. To this day, every time I mention Pythagoras I still recall the image from the book of the Pyramids being built, and so I can both work out the theorem from first principles, as well as recite the rubric.

What *Mathematics for the Million* did for me at age 9 was to clearly illustrate the practical application of a whole range of mathematical formulae. I didn't meet them for the first time as abstract symbols chalked on a board, but as illustrations, in both senses of the word, that I could always recall visually. Mathematics always made sense to me because of this visual understanding of any formula. Recalling mathematical concepts was a breeze: unlike being mistaken for a natural whizz at mathematics for all of my secondary education.

11-plus and all that (ambushed by tests)

Comedian Lenny Henry (2019) gained a Ph.D late in life but, in his autobiography recalled that he had absolutely no preparation for the 11-plus, the signature English exam taken at the end of Primary School and used to determine who was placed onto a successful secondary education pathway. Unlike Henry, I breezed through the 11-plus. Not only had I already worked through lots of math formulae and a whole bunch of other puzzles that developed my problem-solving thinking, but Buckinghamshire County Council allowed 10- -year olds to sit the 11-plus a year early as preparation for the actual exam a year later. In 1962, the 11-plus didn't feel like a "test" or an examination but just some more of the fun I had learned to have from playing around with ideas and solving puzzles. I also created and solved my own puzzles, mostly as games (such as the algorithm-based cricket game I devised and described in 63/68). Lenny Henry, and millions of others finishing primary school in the UK, were given a high-stakes, and potentially life-defining, examination, for which their primary schooling had not prepared them. I got lucky. I'd serendipitously worked out how to pass the 11-plus, whilst playing around in my free time at home.

Change the context, change the boy: Four houses in 12 months

In September 1961, I started my final year of primary school in Radnage. We lived in a thatched cottage in this small village in Buckinghamshire that would have previously been the living quarters of rural farming people. The accidental home schooling that I'd been given by my parents over the previous three years meant I was well-skilled in entertaining myself through reading, solving problems, playing outside, and playing games or sport. (For example, I organised a "run the world" day at the Radnage primary school in the summer where the whole school went running). In this way, I was always stretching and developing my brain both at school and in my free time. Then three months later in November 1961, my family moved to Harrogate because my father was now a qualified and trained teacher and was taking up a role at the local Army Apprentice College in northern Yorkshire (we were forever moving between the North and the South of England).

We moved into a two-up, two-down terraced working-class house (with outdoor toilet) near to Grove Road School that we could walk to in a couple of minutes, as we did in Radnage. It was already my eighth school, and we suddenly played a lot of football in the playground and after school on Harrogate's famous Stray (public park). I created a whole school project to draw a map of the world for the assembly hall. My Mum created a fuss that my Dad was now an Army Officer yet we were living in a tiny house just like the one she had grown up in her mining village. So, three months later in January 1962, our family of four moved into an Upstairs Downstairs 5-bedroom Victorian mansion in keeping with our new posh social status, but on the other side of town to our new primary school. Another three months later, my parents

bought a solidly middle-class, semi-detached house on the other side of Harrogate, and we began a long daily walk back to Grove Road school.

At this point, I had passed the 11-plus and went to Harrogate Grammar School, situated next to the West End Avenue house where I had previously lived, but now over two miles and a free bus ride away. I was now travelling to my 3rd school in 12 months (and my ninth school in total) from my 4th dwelling in that time period. As each house reflected a different element of the acutely defined British class system, I've never really been troubled by class ever since. Nor was I impressed that my posh new school was rugby playing. Consequently, I set up a Saturday football league, created my own team called Bilton Dynamos, and happily ignored the elitist preferences of this Grammar School. It was yet another school that I had just been parked in, for who knew how long? I continued to follow my own well-developed learning interests and went off to the library in town every Saturday, after playing football in my own league, in order to choose more books that fed my curiosity because they both interested and extended me.

This is not the "Homework" we are looking for

Having aced the previous two years of study at primary school, largely because I was simultaneously being home schooled, I felt that I was a good, dutiful and hard-working learner because I was deeply absorbed in learning whatever pleased me. However, I started being given homework, to which my learned response was: "No thanks, I'm already doing lots of work at home." I rarely troubled myself with this "homework" set by school, whilst exercising my mind in many and varied ways. For example, Chapter 13 in *63/68* (Do You Want To Know A Secret) is about a games network that my friends and I set up in 1963. In six different houses and garages, we 12-year olds would simultaneously play Diplomacy, Risk, Monopoly, Go, Totopoly, Cluedo and some games of Cards such as Cribbage, in order that the longer form games (such as Risk and Monopoly) could be left in open play until we could finally finish them. However, when I was caned in January 1963 for not submitting the homework that I had been set by the grammar school, I realised that homework is not learning that you choose to do at home, but compulsory written activities that must be submitted in order to avoid punishment. Inspired by fear, I began to complete this kind of compulsory work at home (not called "home learning" I now notice) in order to avoid further physical pain and, of course, social humiliation or even notoriety. This enforced but nuanced attention to addressing formal learning demands would yet again be disturbed by my next two new schools and their subtly differing requirement – requirements I worked around.

Incidentally, I heard my beloved Beatles for the first time in January 1963, immediately after being caned by the headmaster for not doing homework. This began my pursuit of informal learning and building informal learning communities around shared interests concerning popular music throughout the Sixties. Having just completed an online blog project in 2019 concerning the Abbey Road album, I realised that The Beatles' first UK number one single happened just after I was punished for being a bad little child at school. Not only that, their last contemporary number one single in the UK, *The Ballad of John and Yoko*, was topping the UK record charts as I was sitting my last A-level exam, immediately prior to leaving school. In essence, the Beatles sound tracked my schooling. Perhaps it was unsurprising then that my time listening to the Beatles in the Sixties was the original metaphor with which I described how I developed my learning agency. It isn't entirely inaccurate though, since sharing my love of popular music was how I kept my learning agency alive as a teenager – after having been accidentally home schooled into a love of reading (especially long books) and problem-solving. Both these capabilities continue to motivate my interest in everything in the world and in learning. My love of The Beatles, and their 21st century remastering projects, continues and is often how I interest people in my more theoretical work on learning and heutagogy. Indeed, I am usually introduced as a Beatles expert rather than an educational expert: it both humanises my expertise and helps with making friends.

My personal learning literacy: A "craft of learning"

Now in the 21st century, looking back, I would say that my formal, structured, secondary school education occurred in parallel with my creative, informal learning, which was driven by interests I shared with my friends. However, as a teenager I also continued to read broadly and avidly beyond the requirements of school: *Plato's Republic*, *Einstein and*

Relativity Theory, James Joyce and the very long read that is *The Lord of The Rings*. My formal education was framed by the subject-based curriculum, which in the UK we foolishly narrowed down to three subjects to study between the ages of 16 and 18: mine being Mathematics, Further Mathematics and Physics. Meanwhile, through personal choice I developed a Folksonomy, or my self-determined learning curriculum. In creating this curriculum, I drew on topics of interest to me concerning not only music but popular culture as a whole, including poetry, films, and theatre (I also wrote and directed amateur plays then). I also explored fashion and designing my own clothes, which is how young people usually signify their emerging social and cultural agency to their "elders and betters". Unless we go to art college, there is no formal curriculum for this kind of cultural learning, which we all engage with especially in our teenage years.

Our human curiosity and diversity usually finds original ways to signify itself. In the Covid-19 lockdown nearly everyone engaging in a web conference or being interviewed by the broadcast media has chosen to represent themselves with an arrangement of objects by which to signify their interests: books, paintings, musical instruments, prints, posters and, for the more digitally literate, latest recording technologies. No one in the UK has chosen to represent themselves with educational qualifications framed prominently on their walls at home: we bury that educational trauma. Education disenfranchises our learning by disabling our learning agency. As the jazz musician Wynton Marsalis said recently about jazz critics, "they're our enemy" and he urges musicians to "develop an independent sense of integrity" (Baldwin, 2020). Curiously, we represent our individual character culturally whilst being told that we have to represent our social value educationally. This has developed into a disastrous human asymmetry of "learning" formal education.

How can educationalists help develop learning agency?

As someone who was accidentally home schooled, I recognize that this bequeathed me with two essential qualities that fostered my learning agency before I reached the more formalized period of education at a secondary school. These were, firstly, my curiosity and the freedom to follow the interests that emerged (described in more detail in 63/68): this informal learning enabled me to create my own folksonomy of learning interests. Secondly, I had unwittingly developed a learning literacy based on both the literacy and numeracy skills my parents had inculcated in me, and the attendant problem-solving abilities it had engendered, which meant I could cope with the formal subject-based educational taxonomies of secondary school once I was forced to. Arguably, these three – my personal literacy, numeracy and problem-solving abilities – represent a craft of learning developed over many years of learning by and for myself.

Educators, who by necessity are delivering education within the formal taxonomies of subject-based learning, should endeavour to open out their subject to the interests of their learners in various ways that they can think of. Not least, this can be done by creating assessment opportunities that are negotiated, individually with all learners. This is an educational process that I call "brokering" (Jennings, 2010), which is based on teachers balancing between the formal requirements of the education system and the personal agency of each learner. Whilst teachers are developing their own craft of teaching (Ecclesfield and Garnett, 2010), they can help learners develop their personal craft of learning. After all, learning is a process of asking questions, whereas education is a system of delivering answers.

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Chapter 4

Learner Agency and the Learner-Centred Theories for Online Networked Learning and Learning Ecologies

Lisa Marie Blaschke , Aras Bozkurt, & Dave Cormier

Connectivism

Heutagogy

Learner Agency

rhizomatic learning

Online Learning Ecology

online networked learning

Self-Determination Theory

The connections and networks we make both inside and outside of the classroom are critical to our current and future professional success and to the development of lifelong learning skills. Learner agency plays a central role in establishing and building those connections and networks, and by using a variety of online, networked theories, instructors are able to guide and support students in creating and developing their own network of personal learning. These teaching and learning approaches are not limited to heutagogy (self-determined learning), but also include connectivism and rhizomatic learning – all theories that promote learner agency through connectedness and connectivity in the learning process. This chapter discusses these learner-centred theories for networked learning and their role in promoting learner agency in online learning spaces and within learning ecologies as a whole.

Introduction

Education plays a pivotal role in the progress and development of both individuals and societies. Historically, education has been driven by access to information and to knowledge. It has also been assumed that learning occurs better (and is more efficient) in schools and classrooms where the learning can be monitored and controlled. Learning, together with teaching, leads us to education, which can be structured, semi-structured and unstructured. Formal education, as we know it, is mostly structured, with the goal of achieving predefined learning outcomes. Thus, societies have used education to educate and then *harvest* individuals for the greater good of society itself. Such a perspective confirms the view that [structured] education is political and can be used as a tool to organize and control groups, communities, or societies (Friere, 1975). From this perspective, it can be argued that education is a political tool to plant ideas, that learners (without agency) are the final products, and that [Fordist] educational processes are meant to harvest the things planted in learner minds. The implication of this is that when we enforce a single perspective or point of view, learning objectives and structured learning processes become barriers to the free mind, creativity, innovation, equity, social justice and the democratization of education.

Education as described above is easy to implement for those investing in the knowledge economy, because formal education in modern societies has traditionally occurred in classrooms, under the supervision of teachers and inside of controlled systems. However, the abundance of connections to people and information that has accompanied the advent of online networks has resulted in emerging theoretical/conceptual frameworks that have unleashed a new era of learning and enabled unprecedented learner agency. We argue that learning has always been social, contextual, and mostly emergent – and is about mining data, interpreting information, gaining knowledge through experience, and meaning-making. As learning is social, there are objects and subjects that eventually appear in the relationship of the knowing and known. In this chapter, we explore theories and practices common to online networks, which provide some tangible solutions for enhancing learner agency by using available online technologies and taking advantage of the affordances they offer.

Online networks

Online technologies have introduced an era of networked societies (Castells, 2004) and networked individuals (Rainie & Wellman, 2012). Online networks, in contrast to formal learning, provide informal learning opportunities, and these new networked societies bring together both physical and digital worlds to create learning ecologies where, “it is difficult to say where one starts and the other ends” (Bozkurt & Keefer, 2017, p. 4). In such learning ecologies, pursuing knowledge and participation “is not mandatory, but rather motivated by an interest to know, share, create, connect and find support, and these activities lead to a range of learning outcomes” (Ala-Mutka, Punie, & Ferrari, 2009, p. 350).

In addition, the affordances of online technologies have created environments and networks that promote learner agency by connecting, collaborating, creating, and sharing in learning processes (Blaschke, 2016; Cochrane & Bateman, 2010; McLoughlin, & Lee, 2007). The advantage of online networks is that learners can join learning ecologies as a networked individual, as well as create collectives of individuals with a joint purpose, which then leads to the eventual building of community (Ala-Mutka, 2010). Such a climate offers learners an opportunity to create their own learning environment and gives them more autonomy, while also giving them more responsibility (Attwell, 2007). This approach impacts on the individual’s learning practices and skills in learning independently, as well as draws on the learner’s intrinsic motivation to know and learn (Saadatmand & Kumpulainen, 2013).

Online learning ecologies

Learning ecologies are comprised of both traditional and online learning environments, as well as of those environments in which learners work, live, and play. Bozkurt and Hilbelink (2019) describe the learning ecology as one in which: living and nonliving entities have a symbiotic relationship both in offline and online worlds. For instance, we interact in offline worlds with individuals, animals, pen, paper, books, and many other entities in our learning processes; similarly, we interact in online worlds with codes, tags, and digitally presented identities. In short, they are not two different things, but an extension of one another (para. 5).

Nonliving entities, such as texts that convey meaning, have more significant roles because they are not mortal. In contrast to living entities, nonliving entities can bridge past, present, and future. Therefore, it is vital to have symbiotic relationships with nonliving entities as well as living entities. Together they create a complete learning ecology.

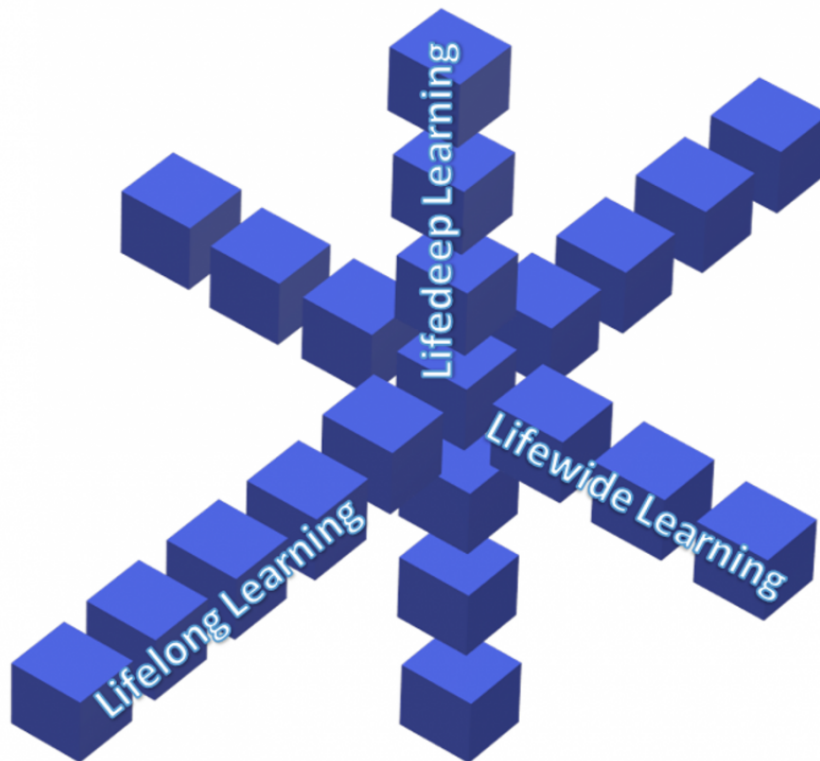
A learning ecology perspective fundamentally assumes that learning is nonlinear, emergent, and contextual, thus implying that learning is an ongoing journey. Characteristics of online learning ecologies include:

- Learning occurs in the chaos and complexity of a system with multiple layers and multiple communication paths and ways of interacting.
- The learning landscape is transitional and in an intermediate state.
- Learning ecologies are constantly evolving and self-organizing, naturally emerging, and distributed, as well as complex, highly dynamic, open, self-controlled, and self-maintained (Brown, 1999; Chatti, Jarke, & Quix, 2010).
- Learners are enabled to take control of their own learning process (Blaschke & Hase, 2019).
- Production and consumption patterns of knowledge are defined according to the self needs of an entity or individual.
- Knowledge is universal, belonging to all shareholders in and out of the ecology.
- The learning authority is defined by the online ecology itself, and therefore, the learning authority is decentralized.
- The learning ecology is open and easy to enter and exit and, therefore, supports widening participation, which can lead to further democratization of education, the liberation of knowledge, and creation of equity for those who pursue knowledge.

The potential of [networked] learning ecologies lies in facilitating lifelong, lifewide and lifedeeep learning (Figure 1). While lifelong learning refers to self-construction of learning, lifewide learning refers to horizontal exploration. Lifedeeep learning refers to vertical exploration of the knowledge. In other words, lifelong learning refers to learning during an entire lifespan, lifewide learning refers to cross-pollination across formal, non-formal and informal learning spaces, and lifedeeep learning is the extent to which the learning is self-constructed and self-defined. Proposing a multidimensional learning journey requires a space which is transitional, and we can create this space when we give learners agency in a learning ecology, letting learners define the learning themselves.

Figure 1

Lifelong, lifewide and lifedeeep learning.



A learning ecology, in addressing all emerging needs and chaos, is a systematic meta-organization and includes all lifelong and life-wide learning domains (Hill, Wilson & Watson, 2004; Looi, 2001). Most importantly, a learning ecology is

a living entity, which makes it adaptive and fragile (Jackson, 2013). Therefore, when we talk about learning ecologies, we do not only refer to informal learning and online learning ecologies; instead, a learning ecology is the merging of all the domains – from structured to unstructured, from formal to informal – on a continuum and which provides the flexibility and agency that learners need for meaningful learning experiences.

The challenge in realising of these dimensions of learning is that instructional practices are being “substantially shaped by traditional teaching modes, prescriptive learning outcomes, normative expectations, and conventional hierarchies” (Williams, Karousou & Mackness, 2011, p. 40), which hinder online learning ecologies from reaching their full capacity. These long-established, hierarchical communities, where the stream of the power and power relations have led to centralized networks of learning, are sharply different from naturally evolving and relatively new online learning ecologies. Because we know that learning is transitional (Savin-Baden, McFarland & Savin-Baden, 2008; Savin-Baden, 2019) and that much of learning happens outside of formal school and training environments (Collins & Halverson, 2010), there is a need for new strategies to exploit the full potential of informal learning in online learning ecologies.

Learning theories for networked learning

The mind is not limited to only cognitive processes: rather, it is a network of the total interactions at individual, social, and universal levels (Bateson, 2000). However, conventional learning theories fail to address this phenomenon or to effectively explain learning in the digital knowledge age. Siemens (2006) argues that “theories of learning today need to account for the rich, dynamic, interconnected, and complex systems in which knowledge is created and shared. Metaphors of learning ecologies and learning networks provide the basis for future educational models, more tightly aligned with the context and characteristics of knowledge today: “chaotic, cross-discipline, and emergent, not hierarchical as reflected in the current approach to course and curriculum design” (p. 53). Therefore, in the digital knowledge age, connections, online learning ecologies and online networked learning theories matter, and it is critical to design education according to theories for networked learning that encompass informal and formal learning, which occurs both online and offline.

Connectivism and rhizomatic learning are two emerging theories of learning, or stories of learning, that propose explanations for learning in our knowledge-intensive digital age. In this context, “connectivism focuses on where the knowledge is and how learners interact on networks, on the other hand, rhizomatic learning focuses on how learners navigate and detour through the network and pursue knowledge as a creative quest for learning” (Bozkurt et al., 2016, p. 7).

Connectivism

A learning ecology is complex, emergent, highly dynamic, open, self-controlled, self-maintained, and self-organized (Chatti et al., 2010). Siemens (2006) has argued that conventional learning theories fail to explain learning in the digital knowledge age (Siemens, 2006). Introduced as the learning theory of the digital age and as an extension and synthesis of earlier theories (Siemens, 2004), connectivism argues that learning occurs across networks (Downes, 2012; Siemens, 2004), and some networks can “support [learner] agency and cognition” (Downes, 2019, p. 117). Connectivism further argues that “knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks” (Downes, 2012).

Siemens (2004) proposes principles of connectivism as follows:

- Learning and knowledge rest in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known.
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision. (paras. 49-56).

One thing that is salient in connectivism is establishing, nurturing and maintaining connections with human and nonhuman entities to access current and needed information. As a complementary argument to connectivism, rhizomatic learning defends the view of establishing connections with a specific focus on how learning needs are defined and suggests that although people may be effective at identifying needs that are simple or complicated, they can't effectively define their complex learning needs.

Rhizomatic learning

Originally inspired by the magnum opus work of Deleuze and Guattari (1987), 'A Thousand Plateaus', rhizomatic learning refers to nonlinear, unstructured learning (Cormier, 2015), which is further defined as an evolving path (Bissola, Imperatori & Biffi, 2017; Phillips, 2017) and a collective process as it, "ceaselessly establishes connections" (Deleuze & Guattari, 1987, p. 7). According to Bozkurt et al. (2016), "Rhizomatic thinking and, by extension, rhizomatic learning is a philosophy, a heutagogical approach, a critical approach, and a combination of all these; yet most importantly it is a form of inquiry for those that excel in learning from informal experiences." (p. 7). Accordingly, rhizomatic learning emphasises the interconnectedness of ideas with many entry points (Sharples et al., 2012), and further suggests that knowledge is contextual and needs to be discovered by learners (Cormier, 2008). Criticizing traditional approaches, it suggests that learning is not predetermined, but is rather an emerging process (Bissola et al., 2017; Cronje, 2018), where perceived learning matters (Lian, 2004), and thus the learning path should be defined by learners themselves (Lian, 2011).

Although there are some opposing ideas (Mackness & Bell, 2015), according to rhizomatic learning, learners' experiences show that the community can be curriculum for learning (Bali et al., 2016). Cormier (2008) further explains that community is the curriculum, because "curriculum is not driven by predefined inputs from experts; it is constructed and negotiated in real time by the contributions of those engaged in the learning process. This community acts as the curriculum, spontaneously shaping, constructing, and reconstructing itself and the subject of its learning in the same way that the rhizome responds to changing environmental conditions." (para. 12). In brief, rhizomatic learning asserts that in a complex, connected environment, people can and do learn from other people in ways that they cannot predict and could and/or would not seek out on their own. The simple participation in a community of knowing will lead to new connections that are both necessary in order to be accepted in that community and that are not achievable in other, more linear fashions.

Learning theories for networked learning defend the view that online networked spaces offer multiple entry points (Mbati, 2017), and learners in these spaces should take the lead for their own lifelong learning journey (Ossiannilsson, 2017) in order to learn from their experiences. Connectivity-oriented pedagogies such as connectivism and rhizomatic learning suggest that we give learners responsibility and agency in online learning ecologies so they have an opportunity for tailoring learning experiences to their learning needs.

Heutagogy (self-determined learning)

Like connectivism and rhizomatic learning, heutagogy (Hase & Kenyon, 2000) is a networked theory of learning that promotes learner agency, while further expanding upon other aspects of learning and the role of the learner as an agent

of learning. The theory builds upon established learner-centred learning theories such as constructivism, humanism, reflection and transformational learning (Bandura, 1977; Maslow, 1943; Mezirow & Associates, 1990; Rogers, 1961; Schön, 1983) and is based in the following core principles (Blaschke & Hase, 2019):

- **Learner agency:** Central to heutagogy is the concept of the learner as the primary agent of his or her learning, with the learner making decisions about learning, from what will be learned and how, to whether learning has been achieved and to what degree (e.g., self-assessment).
- **Self-efficacy and capability:** Also central to the theory are the principles of 1) self-efficacy, which is the learner's belief in his or her own abilities, and 2) capability, which is the ability of the learner to demonstrate an acquired competency or skill in new and unique environments; the resultant experience of both has the potential to create transformational learning.
- **Metacognition and reflection:** Reflecting upon and critically thinking about what has been learned and the process of learning, in the form of double-loop learning (metacognition), is another principle of heutagogy.
- **Non-linear learning:** The learning path is directed by the learner, and is not pre-defined or sequential, as the learner is responsible for identifying what will be learned and how. As a result, this path can often be chaotic and divergent - much like learning in connectivist and rhizomatic learning environments.

The relevance of heutagogy to networked and online and distance learning has been described in the literature, and like connectivism and rhizomatic learning has been found to be applicable to MOOC environments (Agonacs & Matos, 2019; Anderson, 2010; Blaschke, 2013). Heutagogy is also highly relevant to learning ecologies due to it promotes learner agency and autonomy and allows the learner to define his or her learning goals and how these will be assessed, as well as supports the learning experience in both formal and informal learning environments (Siemens, 2007).

Conclusion

This chapter suggests that an ecological perspective in learning can be helpful in order to better understand how meaningful learning occurs across informal and nonformal and formal learning spaces. Considering that knowledge is a universal entity that is constructed by individuals and belongs to everyone who demands it and wherever they need it, networked learning and learner-centred theories support the view that learning should be designed in such a way as to increase learner agency, drawing on and nurturing learners' intrinsic motivation to learn. Learner agency through heutagogy and online learning ecologies provides sustainable learning experiences because, as highlighted by connectivism and rhizomatic learning, autonomy is given to the learner. Rather than being constricted by predefined goals or objectives, learning is defined by learners' self needs, and it is meaningful as long as it satisfies learners' needs and engages them in determining what will be learned and how learning will be undertaken. Such an approach, already characteristic of informal learning, can work to establish learner agency as a standard for learning, develop learner self-efficacy and capability as a pathway toward active, meaningful, and satisfying learning, and promote critical thinking and reflection when applied within formal learning environments.

Learner agency can be further associated with lifelong, lifewide and lifedeeep learning where learners pursue, discover and explore knowledge in a multidimensional space rather than a flat, linear one. Educators, as well as learning designers, should be aware that learning is a transitional space: learning happens anywhere, anytime, and it is the learners' needs that matter, not learning defined and bound by so-called authorities. By promoting learner agency, we loosen the grip of authoritative constructs on the learning process, thus empowering learners to move fluidly across formal and informal learning spaces. Based on these notions, this chapter suggests that there is a need to better understand perceived learning and describes how networked theories that promote learner agency can be used to ensure and enable lifelong, lifewide and lifedeeep learning.

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Chapter 5

Fostering Learner Agency in a Digital Literacies Course in Egypt: Reflections on Several Iterations

Maha Bali, Toqa el Ahwal, Mai Hashad, Youssef Fahmy, & Khaled Abou Hussein

Learner feedback

Ungrading

self-assessment

learner-contributed content

learner-defined pathways

Nurturing learner agency can foster critical citizenship for young adults in a relatively safe environment. The American University in Cairo (AUC) has a mostly Egyptian student body, coming from diverse educational backgrounds: some have experienced schooling which centers around memorization and teacher authority, thus stifling agency and critical thinking. In addition, we are surrounded by a culture and political environment that does the same: an authoritarian government that makes questioning authority and free speech in general risky. This chapter reflects on attempts to create space for learner agency over three years of teaching the course, Digital Identities and Digital Literacies in an Intercultural Context. Four co-authors reflect on these three approaches:

- 1. Ungrading via learner self-grading*
- 2. Learner-contributed content and activities*
- 3. Choose-your-own-pathway for developing digital literacies*

This paper will describe how this approach evolved over time and how learner reactions were observed and listened to. Some of the challenges and how the underlying critical pedagogy values were used to guide the teacher in addressing them are also presented. Included is how the teacher's own agency as the sole designer and teacher of this course (which is independent of other courses at the university) helped provide flexibility. In addition, the co-authors (students) will reflect on their learning experience (quotes are in italics).

Introduction

I (Maha Bali) teach an undergraduate course at the American University in Cairo (AUC), Egypt. This chapter is co-authored with four of my students who took my course *Digital Identities and Digital Literacies in an Intercultural Context* in Fall 2019. I use first-person throughout, and my co-authors' contributions are quoted separately and named by their first names: Khaled, Mai, Toqa, and Youssef.

Students who take my class are mostly Egyptian, but come from diverse educational and cultural backgrounds, some of which have stifled agency and critical thinking by emphasizing memorization and teacher authority in classes that lack dialogue and active learning. In Cairo, we are surrounded by a culture and political environment that does not readily encourage criticality and dissent - political free speech against authoritarian governments is risky.

Khaled reflects on learning before my course:

'Most of my learning experiences so far largely lacked learner agency, mainly due to the fact that teachers and professors come into class having already prepared their syllabi and what they wish to teach about their subject or course.' (Khaled)

Toqa wrote, *'In school I usually had this fixed curriculum where the goal was to learn every chapter of the book (so far away from the learner agency concept).'*

Over three years of teaching the course, I have tried creating space for learner agency in various ways. In this chapter, I will reflect on:

1. Ungrading via learner self-grading
2. Learner-contributed content and activities
3. Choose-your-own-pathway for developing digital literacies

I will describe how I applied each of these instructional approaches and how my approach evolved over time as I observed and listened to learner reactions. I will discuss some of the challenges and how my underlying values guided me in addressing them. I had a lot of flexibility as the designer and sole teacher of this course. This course was not a prerequisite for any other, but was one option among several 'core curriculum global studies' requirement courses within a liberal arts institution - therefore there was no pressure to fulfill particular content requirements needed in future courses or accreditation requirements for a degree, as long as the course fulfilled some skills-based learning outcomes related to reading, writing, critical thinking, oral communication and global/intercultural learning. When I speak of learner agency here, I mean, 'that each person is a dignified and responsible human being who shapes her or his own life in the light of goals that matter, rather than simply being shaped or instructed how to think' (Walker & Unterhalter, 2007, p. 5). This understanding seems to fit with the liberal arts philosophy of AUC, although it should be noted that AUC students have mentioned that most STEM courses do not promote learner agency, while some courses at AUC do.

I will briefly discuss the underpinning theory behind each approach I used in my course, but one of my important guiding principles here is human capability theory. As Walker and Unterhalter (2007) state, "We must evaluate freedoms for people to be able to make decisions they value and work to remove obstacles to those freedoms, that is, expand people's capabilities" (p. 5). One's environment and upbringing can limit one's capacity to choose, even when given choices such that, 'Unequal social and political circumstances (both in matters of redistribution and recognition) lead to unequal chances and unequal capacities to choose' (Nussbaum, 2000 in Walker and Unterhalter, 2007, p. 6). As such, when given choices, disadvantaged groups may end up with diminished agency as they recreate the hierarchies and oppressions they have internalized as to what is possible for them rather than what is in their best interests (Walker & Unterhalter, 2007). It is, therefore, essential to recognize that while schools have the potential to empower learners, they have historically also been used to reproduce inequalities, and any work toward nurturing learner agency for young people will be working to undo that history, which touches different learners unequally. While AUC is a private institution and many of its learners are economically privileged, schooling has suppressed their power to think critically, express themselves and make their own pathways in life.

In what follows, I include some quotes from my co-authors which they contributed via a student survey and/or from public student blogs. The survey was inspired by the understanding of learner agency in the *Practitioner's Lexicon: What is meant by key terminology* (Education Reimagined, 2016). This describes learner agency in concrete terms as: a sense of learner ownership over one's own learning; an ability to articulate their learning needs and desires; learners developing adaptability, flexibility and resilience as they deal with increased responsibility for their learning; growing self-assuredness and self-confidence; a sense of self-worth and believing their ideas are valuable; and that learners feel supported to take ownership of their learning in preparation for becoming lifelong learners.

While originally intending to run the survey with a larger number of students (all past students – ca. 100) and receiving institutional ethics approval to do so, I ended up only following up to have four responses to this narrative survey from

students in the Fall 2019 semester who volunteered to co-author this chapter. These four students are not a random sample. They spoke and blogged critically throughout the course and gave me insights on how I might do things differently, and responded to my call for co-authors. Due to the COVID-19 pandemic, we were unable to fully co-author every step of the way, but they have all read and given feedback on the chapter and agreed to keep their names as co-authors. I felt that their voices were central to the chapter and deserved co-author status.

Ungrading via learner self-grading

Ungrading is a practice that recognizes that assigning a single letter or number to communicate student learning is problematic, and that, rather, 'Assessment must be a conversation' (Sackstein, 2015, Kindle loc 5). Ungrading can be done in a variety of ways (see Blum & Kohn, 2020), but all question the value of grading practices and attempt to undo some of its potential harms to learning and wellbeing.

I work at an institution that requires student grades (A-F), to have a relatively normal distribution (average B or B+) and to have a clear grade breakdown and cut-off point for each grade in the syllabus. However, this goes against my teaching philosophy. Instead, I believe strongly in what Palestinian mathematics educator Munir Fasheh (2000) has said, 'Giving a number or a letter to measure a human being is dishonest and inhuman; it is degrading to the human mind and to human beings. Grading, in this sense, is degrading. It is one of the biggest abuses of mathematics in its history!' (para.7)

Grades diminish learners' intrinsic motivation (Kohn, 2011), introduce a culture of expecting external evaluation of one's work and create a sense of competition amongst peers. Instead, I want to encourage learners to critically look at their own work and to self-assess their effort and output. As Stommel (2017) writes, 'Agency, dialogue, self-actualization, and social justice are not possible in a hierarchical system that pits teachers against students and encourages competition by ranking students against one another' (para 2).

For this reason, I have experimented with different ungrading approaches over the years (and have written several blogposts on my process). Here is the approach I use:

1. **At the beginning of the semester**, I explain my approach to students. Most have never seen this before, so I explain that early in the semester I give numerical grades for work done, so they can keep track of what they are doing, and to give feedback; but towards the end of the semester, I mainly focus on giving feedback and asking them to self-assess their performance/learning.
2. **Mid-semester**, I take a whole class session where students self-assess their performance in the course so far, as follows:

1. While entering class, students write on two whiteboards the answers to questions such as, 'how to do well in this course?' and, 'what is a good blogpost?' They can add something new, agree with others, and return to add to the board at any time.
2. In groups of four or five, students do an activity of building things with magnet balls and rods, doing two different tasks, which demonstrate the difference between strict instructions and looser instructions that give room for creativity.
3. Students choose to read one of two articles on grading (Fasheh, 2000; Kohn 2011). They post to the course Slack (a channel-based messaging platform I use for informal communication with my students) a favorite quote from the article they read.
4. After about 30-40 minutes, we pause to discuss the activity and readings, and discuss what a grade means to them. They usually bring up grading as a comparison to a preset benchmark, or comparison to peers, or a measurement of effort. I tell them none of these alone is really fair or equitable, but to think of a combination of them as they self-assess. I explain why we are doing self-assessment and that this will help them become independent adults in their lives beyond the course, able to evaluate their own work and personal achievements .
5. Students answer a two-part survey (see sample here: <https://bit.ly/MidSelfAssessSample>) on their phones. First, they rate their own effort and consistency and quality of their work in the course (broken down by key things like class participation and key assignments), followed by what grade they aspire to in the course overall, how well they're doing so far, and a justification for the grade they gave themselves. The second part asks their feedback on the course: what is helping their learning and what they would suggest to make the course better for the second half of the semester. Recently, I added a question towards the end on how they feel about the self-grading process. Some people, especially traditionally high-achieving students, feel uncomfortable, and some are afraid of overestimating themselves.

1. **After mid-semester self-assessment grades are submitted**, I get back to each student and let them know if I agree with their self-assessment grades, and what they need to do to get their aspirational grade. For the most part, my own holistic assessment of their grades is usually very close to theirs, and sometimes I give them a higher grade than they give themselves. Occasionally, some students overestimate themselves to an extent I cannot accept (e.g. they are missing work worth 20% and want to get an A- which would not be fair to other students at all) so I explain this to them.
2. **At the end of the semester**, students do a similar survey to the mid-semester survey. But they self-assess their final grade (see sample here: <https://bit.ly/EndSelfAssessSample>). This, coupled with a final reflective portfolio, is the final assessment of the course. There is little time to discuss their self-assessment grades, but if someone's self-assessment is too far above what I feel they deserve, I discuss with them. If students underestimate themselves, I give them the higher grade I feel they deserve.

This process has flaws. Not because it is subjective (numerical and alphabetical grades are also inherently subjective in that the teacher chooses the criteria, weight, breakdown) but because I am unable to give students 100% agency. Although the majority of students get the grade they gave themselves or higher, a few overestimate themselves, and I do not feel comfortable giving them those grades, particularly when they haven't submitted work at all that is worth substantial weight. I recognize that I am the one with power to give certain assessments higher weight and that learners do not have control over every aspect of their assessment and its weight. Also, as you will see from the learner feedback below, some felt they needed more guidance on the approach:

'This was helpful because the professor was transparent with us and most of us knew where we stood in terms of our grades and performances. However, I believe the self grading criteria could be more detailed to allow everyone to grade themselves as accurately as they could.' (Youssef).

Youssef's comment above implies an incomplete sense of agency, wanting more direction from the teacher. Perhaps rather than offering students criteria, I could spend an extra class session collaboratively developing criteria with them, ensuring all of them contribute to this process.

'It was great to be able to assess myself, because after we did the first self grading half way through the semester, I realized what aspects of the course I wasn't so good at so I started to work more on myself in these particular aspects. However, I felt a little uncomfortable putting the grade for myself because I did not want to seem like I'm complimenting myself or giving myself more than I deserved so I was very cautious.' (Toqa)

The caution of overestimating oneself comes to me occasionally from hard-working students. Like Toqa, Mai found the mid-semester self-assessment helpful.

'I felt it provided a fair evaluation to our work. Also, the mid-semester assessment was a great idea because it made us realize our weak points that needed to be worked on; it was like some sort of wake up call. This was specifically true because in the assessment there was a question that asked us what can you do to improve our grade. This allowed for the setting of actual goals that the student believes s/he can achieve, which actually motivates him/her to work towards it and learn better through working towards achieving it.' (Mai)

Learner-contributed content and activities

This approach is inspired by Culturally Relevant Pedagogy (CRP), an approach originally developed for the US context of multiracial classrooms with students of variable socioeconomic background (Howard 2003; Gay, 2002; Ladson-Billings, 1995). Its relevance to AUC is in the aspect of flipping the approach of assimilating students into the educational institution's (dominant) culture - in this case, the neocolonial US culture, rather than the students' (and my) own Egyptian culture. CRP creates a more 'synergistic relationship' between a students' community/home culture and that of school (Ladson-Billings, 1995, p. 467) and 'addresses student achievement but also helps students to accept and affirm their cultural identity while developing critical perspectives that challenge inequities that schools (and other institutions) perpetuate' (Ladson-Billings, 1995, p. 469).

While I try to bring in content relevant to students' own cultures, I also encourage learners to contribute content and activities to the course and encourage them to bring content from their own local and personal contexts wherever possible. Originally, I gave an assignment towards the end of the course, worth 5%, for learners to contribute one new material (reading, video, article, podcast) or activity to the course. I realized that some of their contributions can be really helpful, and they often relate to topics covered earlier in the course, so I started encouraging students to submit contributions during each course topic, and I recognized their contributions and invited them to present their contributions to the rest of the class. In some semesters, students did this on an almost weekly basis, which enriched the course and gave me material to add as essential in future semesters.

One semester, students suggested in their mid-semester feedback that we study more Egyptian-context digital literacies, so that semester (and beyond it) I added an assignment to find an Egyptian or Arab person or group who is using their digital literacies well (e.g., a Facebook group for activism or an Instagram or YouTube influencer) and to present this "exemplar" to the class. This assignment has proved to be inspiring, and I personally learned a lot: I learned about who and what inspires my students, and I have been inspired by their choices. Their choices are all added to a course Padlet, which we keep adding to every semester so that we have a student-contributed repository of locally relevant examples of digital literacies.

In different semesters, a student suggested we expand our discussion of bias and equity to include Othering, and since then, an article on Othering has become part of the course; another student contributed an Egyptian story of Fake News that I incorporated into future semesters. Other students contributed pop culture clips, YouTube channels, and class activities to reinforce concepts we learned in class, and sometimes students chose the option to do surveys or case studies to expand our knowledge of how Egyptians practiced/viewed digital literacies, rather than contribute content. It is important to make space for every student to suggest things like this, not only the ones confident enough to do so in private or in public.

Learners can end up reproducing dominant narratives of what they think I expect or consider to be quality content. However, when they see how previous semester contributions from pop culture were valued; for example, it encourages them to recognize that what is valued need not be traditionally valued academic content.

I loved contributing to the course, it was like I added a piece of myself to the course and I let everyone learn something new just because of me. Maybe this is how it feels to be a professor? '(Toqa)

Choose-your-own-pathway

This approach is inspired by Crosslin's (2018) work on multiple learning pathways. The idea here is strongly based on heutagogy and giving learners the capacity to determine their own learning goals and pathway. Giving learners power and agency to do so requires a 'paradigm shift' for learners and teachers accustomed to always following a single pathway that meets outcomes predetermined by the instructor. It is a challenge to include multiple learner epistemologies and treat them all as valid within one learning experience (Crosslin, 2018, p. 141). Crosslin (2018) started describing dual and then multiple learning pathways, from allowing learners to follow more instructivist/linear approaches to more connectivist/nonlinear approaches and allowing learners to switch between pathways when they felt they needed more scaffolding or more freedom at certain points.

In my course, I recognized that digital literacies are multi-dimensional, that different learners may have strengths in some areas and weaknesses in others, and that learners may be more interested in one topic (e.g., online privacy) than another (e.g., use of social media for collaboration). Students had choices over *what topic* to focus on and how to learn about it.

I designed it as follows (slides and video on my course website: <https://edtechbooks.org/-MtmV>):

1. Learners read a general article differentiating digital literacies from digital skills and reflect on it.
2. Learners do an online self-assessment of their digital literacies to highlight their strengths and weaknesses and set learning goals for themselves.
3. Learners choose their own pathway to develop digital literacies in the course, with a large timeframe of around 4-6 weeks to work towards achieving their goals. They could choose both the topics that interest them, and the learning methods. The learning methods were one of the following:
 1. **Tinkering path:** learn via doing small assignments from an assignment bank (in this case, <https://assignments.ds106.us/>, categorized by which skillset the assignment develops). These were mostly quick and easy to do, so students on this path were asked to do six assignments.
 2. **Theory path:** learn via reading articles of their choice (in this case, select from the *Mozilla Internet Health Report*, categorized by topic). These were not long articles, but some had new concepts, so students were asked to do three.
 3. **Taught approach:** learn via self-paced learning modules and earn badges (in this case, from the *All Aboard* website). These took time, so students were asked to do two.
 4. **Twisting path:** do a combination of the above, keeping in mind the different weighting. So, one pathway could be to do one taught module, one reading and one tinkering assignment.
4. Learners would write a reflection at the end, demonstrating their learning and why they made their choices.

A hidden advantage of this approach is that learners look at the options of topics and think critically about which choice to make and what their goals and preferred learning approaches are. I could see from their reflections how some of them learned about themselves. For example, one student set out to do a twisting path, but after trying one tinkering assignment got hooked and stayed there. Others had left the assignment until the last minute and ended up doing the taught path for things they already knew about and as a result, didn't learn a lot.

'I did not really enjoy it because I ended up choosing a simple path in order to complete the assignment on time during my finals. However, maybe if I had started earlier and dedicated more effort towards this activity, I would've enjoyed it and benefited more.'(Khaled)

'I honestly thought this was the least interesting part in the course and the anomaly of the course. In the choose your pathway, I wanted to actually choose a reading and dissect but instead in the "theory" section I was left with topics I found mostly dull, discouraging me from paying attention.' (Youssef)

Time management was a challenge here the first time I assigned this. Students were given a very large timeframe to work on these and advised to do something each week rather than do them all in one day, but many left them until the end of semester and felt squeezed for time and wished they had been given more.

'I really loved the fact that it was diverse and we were given many options to choose from. This allowed us to actually develop our weak areas or our areas of interests. However, I think it should be done in the beginning of the course in order to get the most out of it since later on we touch upon ma[n]y of those pathways in class.' (Mai)

In the second iteration of doing this activity, I discussed the activity weekly with students and reminded them to do it and asked them to share their progress. This second time, more students submitted early, and no one complained of feeling squeezed for time. In future, I may assign it slightly earlier and ask students to present to their colleagues in a quick presentation the key things they learned, so that all can benefit.

Students who managed their time better seemed to enjoy the activity more, especially those who took the tinkering path:

'I enjoyed the hands-on assignments... the tinkering path... it was the finals season and all my written projects and assignments were due. This assignment was a fun break from all that stress because it was all personal stuff.' (Toqa)

Conclusion

Nurturing learner agency is not a smooth path. Occasionally, I get a comment on my teaching evaluation complaining about vagueness in my grading practices. As mentioned earlier, students sometimes struggle to manage their time with assessments that have a relatively open-ended timeframe, but I have tried to lightly scaffold this by suggesting smaller deadlines throughout the semester not just towards the end, and it seems to have helped. However, perhaps it would promote agency better if I invited them to discuss how they might manage their time. Despite misgivings from local colleagues, I have never had students complain of having too much choice. In fact, they occasionally suggest alternatives to choices I offer. Many colleagues started seeing the value of promoting student choice during the COVID-10 pandemic.

One activity where learners have lots of agency, but which I did not cover here, is the project of developing choose-your-own-adventure digital narrative games on topics they are passionate about, as described here:

<https://edtechbooks.org/-qgggr>. Mai wrote "this was probably the best product of this course. This game really pushed me to get out of my comfort zone and be completely candid with myself and with the player. It was totally up to me to create the game on any topic I wanted; there were no restrictions whatsoever."

Another example is that during the COVID-19 pandemic, I invited students to switch their topic to a pandemic-related topic if they wanted to, and about half of them did so. Another thing that students learned indirectly while creating the game assignment was how to take agency over how they use tools. For example, Toqa wrote: "I can proudly say I have used it [Google slides] in a more creative way which was the game assignment. This makes me feel powerful and in control since I'm not just limited to what google slides is 'normally' used for." <https://edtechbooks.org/-mQUd>

I believe that every group of students will respond differently to attempts to nurture agency, especially if it happens in one or two courses but is not a university-wide system, supported by institutional policies. Beyond feedback on how particular approaches developed agency, co-authors wrote about how the course developed their sense of ownership over the course, confidence and lifelong learning. One sentence captures it succinctly: "We all had control over the course" (Toqa).

Mai here speaks about how she was already self-aware before the course, but the course offered her freedom:

'To be honest, I was already familiar with my weak learning points and my interests. The issue was that I didn't have the space nor the time to work on them. However, in the course, I was able to work on them due to the freedom of space we were provided with.'(Mai)

She also writes about the importance of feeling heard by the instructor and students, and of students having control over class discussions:

'The class discussions were always diverse and rich. Not only did the doctor listen to our ideas and our opinions attentively, but so did the class. This made me feel listened and valued. Also, in most classes, we went off topic and discussed other issues or ideas and the doctor was always welcoming and understanding and listened to us.' (Mai)

Finally, I wanted to conclude with a quote on how the course promoted lifelong learning beyond what is familiar in Egyptian education and towards critical citizenship:

'Us as Egyptians often associate learning as "a must" or something forced on us. But this course helped me look at learning differently and I think this is a first step in changing the ideology I was brought up with. If I continue enrolling in courses like this one I'm sure that one day I would develop into a much better person that would be eager to learn alone without "having" to.' (Toqa)

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Chapter 6

Conceptualising and Designing Self-Mapped Learning Pathways Courses to Encourage Learner Agency and Equity

Matt Crosslin

Equity

Technology

MOOC

Self-Mapped Learning Pathways

Course Design

One of the more difficult issues related to agency in education is designing for equity for all learners. Learners enter into every course with unique learning goals, pre-existing knowledge, epistemological preferences, sociocultural contexts, and practical life constraints. Designing one course for this diverse array of factors can be overwhelming, especially when trying to distill all of these unique factors into one learning pathway. The concept of Self-Mapped Learning Pathways (SMLP) has recently emerged as a design methodology focused on encouraging learner agency and equity. The basic idea of SMLP design is to create a course that allows learners to create their own learning pathway when presented with the options of an instructor-led modality and a student-centered modality. Learners can follow either modality or mix the two as needed. This chapter will explore the basic theory behind SMLP as well as current research results, but the primary focus will be on how to critically conceptualize and practically design courses for encouraging learner agency and equity through SMLP.

Introduction

Self-Mapped Learning Pathways (SMLP) were initially conceptualized as a “dual-layer course” design created to encourage learners to move from following the instructor’s pre-determined pathway into a student-centered heutagogical learning pathway. The initial idea of a “dual-layer course” was re-imagined into a design methodology that creates two modalities in any given course. The foundational modality is a complete course pathway designed by the instructor to lead learners completely through the course content from beginning to end. The other modality is a self-determined heutagogical pathway that affords learners the freedom to map their own learning pathway. The key feature of this dual modality design is that learners can switch between modalities at any point in the course based on their needs, goals, or changing circumstances.

Where Did the Idea of Self-Mapping a Learning Pathway Come From?

The first version of SMLPs course came about in 2014 (Crosslin, 2016a) in a Massive Open Online Course (MOOC). MOOCs were initially conceived as learner-centered networked learning experiences in the form of free courses that were open for registration to anyone in the world with access to a computer and the Internet (Kovanović, Joksimović, Gašević, Siemens, & Hatala, 2015). In 2011, a new form of MOOC came to prominence that focused on following instructor-centered pathways (Kovanović, Joksimović, Gašević, Siemens, & Hatala, 2015).

SMLP started off as an attempt to create a dual-layer combination (Crosslin, 2014a) of the two MOOC forma, a course that had one layer for a standard instructor-focused modality, and another layer for a learner-centered modality. The main idea was that learners could choose either layer they wanted to start with and switch back and forth or mix and match as needed, while they progressed through the course (Crosslin, 2015b). The instructor-centered modality was there for those who were either new to the topic and needed a defined guide or, for various reasons, chose to follow a pre-defined pathway. The learner-centered modality was there for those that wanted to make their own pathway or wanted to explore the same topic from a different sociocultural or intersectional perspective.

While the response was very positive both from dual-layer course learners (Crosslin, 2018; Crosslin & Dellinger, 2015), as well as the instructors who tried or considered the dual-layer format in other contexts (Bali & Caines, 2018; Crosslin, Milikic, Dellinger, Jovic, & Breuer, 2019; Hall, 2017; Kilgore & Al-Freih, 2017), there were many important questions raised in discussion and feedback sessions (Crosslin, Dellinger, Joksimovic, Kovanovic, & Gašević, 2018; Dawson, Joksimovic, Kovanovic, Gašević, & Siemens, 2015; Rosé et al., 2015). Many learners wanted to know which modality is better (some felt that using the term “layers” implied one was better than the other). Some of the instructor-centered learning learners wanted to know why the learner-centered options were there, while some of the heutagogical-leaning learners wanted to know why the instructor-centered options were there (many of them even disagreed over whether the course was really instructor- or learner-centered (Crosslin, 2015a)). Several learners felt lost or overwhelmed trying to figure out where to go. Others wanted the course to have formalized avenues of engagement for learners, which were distinctly lacking in dual-layer designs (much of this comes down to personal perspective, as others such as Montero-Colbert, Delia Deckard, Stewart, Richard, and Nanan (2019) would have disagreed with this as they saw the dual-layer as having distinct pathways with formalized peer engagement).

This feedback led to several changes with the design model. The main change was that the concept of “dual-layer” was dropped. The new term “Self-Mapped Learning Pathways” (<https://edtechbooks.org/-RdMG>) was adopted to better reflect what learners were expected to do in these courses. Initially, the goal of the dual-layer course designers had been to push learners towards the learner-centered pathway, but feedback from learners indicated that many of them needed the instructor-centered pathway for a variety of reasons (e.g., time constraints, ease of use, busyness of life) (Crosslin, 2016a). Therefore, the idea that every choice is equally important was adopted (Crosslin, 2015c). To help facilitate that concept, the focus of the course was moved away from complex course maps (Crosslin, 2014c) to neutral zones that described multiple options from which the learner could choose (Crosslin, 2014b).

SMLP Learning Experience Design

Designing SMLP learning experiences can really begin at any stage. One good place to start is by creating a shell for a neutral zone, and then moving quickly to the instructor-centered modality (because that typically already exists in many courses). Additionally, the process of deconstructing and critically examining the instructor-led modality to create a learner-centered modality can be helpful (and enjoyable).

One thing to keep in mind is that courses within formal systems will have limitations or requirements imposed by that formal system. SMLP is one possible design methodology for helping learners take agency over their own learning, but when it occurs within formal structures, adjustments might have to be made. For example, formal education typically requires certain topics to be covered, or assignments to be graded, or certifications to be awarded due to systemic

rules. Adjustments to SMLP to meet these requirements are to be expected. The concepts covered in this chapter are ideals that some can fully implement, but many instructors might have to pick and choose which ones apply depending on systemic limitations.

Neutral Zones – The Learning Experience Hub

The temptation for many will be to use an institutional Learning Management System (LMS) to create the main course hub. While this may be the easiest route, LMSs are really designed from an instructor-centered mindset and should be reserved for that modality. Similarly, the course hub really should not reside on a social networking website because the social nature creates a bias for student-centered learning (and not all learners are ready for that).

One recommendation is a self-hosted website running something like WordPress. A Neutral Zone is intended as a place where both modalities are presented, where options for self-mapped learning will be shared, and where learner examples will be featured (with the permission of learners, and heavy examination by the instructor as to why they share the ones they do share). Something like WordPress provides tools to make all of this happen, but there are others that work just as well. Figure 1 shows an example of a Neutral Zone with pathway options visualized as a stream or a garden. On the left side is the description of options, on the right is the list of options for the "Stream" (instructor-centered) pathway.

Figure 1

Example Neutral Zone

Week 3 Competencies

Competency 7: Reflects on triggering events and how they can be used in education

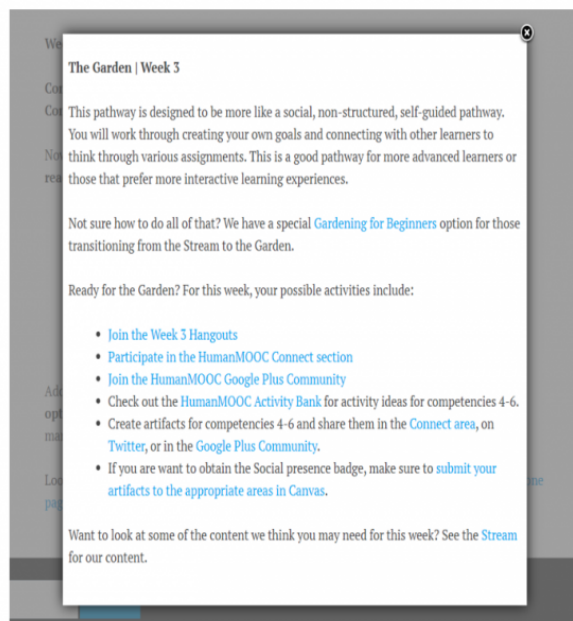
Competency 8: Creates an assignment for course that consists of a peer review component

Now it is time to choose either the *Garden* and *Stream* (or both). Click on the images below to read what that pathway will look like for Week 3:



Additionally, for those that are not sure about the *Garden* pathway, you can choose the **middle option to help you dip your toe into the idea of connected learning** (see the gray question mark image above).

Looking to catch up on Week 0, 1, or 2? See the [Week 0 Neutral Zone page](#), the [Week 1 Neutral Zone page](#), or the [Week 2 Neutral Zone page](#).



Regardless of what tool is used, the goal for creating a Neutral Zone is twofold: to humanize the course by promoting presence (see <https://humanmooc.pressbooks.com/>), and to help learners constantly examine their mapping choices. Here are some resources to read more about the relationship between learner choices and neutral zones:

- Designing a Neutral Zone in Dual-Layer (Customizable Modality) MOOCs (Crosslin, 2014a)
- Digging Into What 'Choice' is in Customizable Modality/Dual-Layer (Crosslin, 2015b)
- Evolution of the Dual-Layer/Customizable Pathways Design (Crosslin, 2016b)
- Every Choice is Awesome. Every Path is Cool When You're in #HumanMOOC (Crosslin, 2015c)

The Instructor-Centered Modality Design Phase

Designing the instructor-centered modality probably will be the most familiar aspect for many. Several resources exist to help create a high-quality learning pathway for following what the instructor thinks that learners should do to master the topic. There is no need to repeat these concepts here. However, there are several issues to highlight in order to make this modality as easy to use as possible for the most learners:

- **Accessibility:** everything should follow all accessibility requirements. This means captioning for videos, alt tags for images, screen reader testing, good color contrast... all of the standards (see <https://edtechbooks.org/-TIE>).
- **Course Alignment:** the instructor-centered modality will need to have well-written goals, objectives, competencies, etc. (see <https://edtechbooks.org/-mbUe>). However, remember that these standards are for those that follow the instructor, so don't become so attached to them that they become the power center of the course.
- **Micro-Content:** When creating content, keep in mind how it will all connect to learners who are creating their own pathway:
 1. Since learners will possibly come in and out of the content and activities, creating each part as stand-alone micro-content (Semington, 2017) will help learners as they map their own pathway.
 2. However, make sure that any learner who stays on the instructor-led pathway doesn't get lost. Make sure there is flow, deep thought, reflection, and other design considerations that help learners move through content smoothly.
 3. Examine all content and activities for bias, oppressive power dynamics, and missed opportunities to examine intersectionality. Invite learners to do the same to help improve course quality.
- **Assessment:** Assessment can be complicated in SMLP courses. This is partly because grading is a complicated and problematic concept in general. The main reason assessment is complicated in SMLP courses is because any grading plans would have to assess work across multiple varied self-mapped pathways. Ideally, in place of grades, instructors could discuss pathway artifacts in an interactive format - learners would submit early drafts of work, instructors would then comment, learners would ask questions and adjust, and the process would repeat until both are satisfied with the final artifact. If possible, learners could also be allowed to work with the instructor to create their own assignments. This system may require some type of approval and oversight at the program or system level, but this possible interactive plan is not unheard of in education. However, since many institutions require instructor to give grades, assessment does need to be addressed in those situations. When grading is required, one method that helps is to first create an ideal grading plan for the instructor-centered pathway. Then consider how that grading plan would need to be deconstructed to make it work for the learner-centered modality as well as the instructor-centered modality. Focus on the core competency that learners need to demonstrate rather than specific assignment-based details like word count requirements and standardized test questions. This idea will be explored more in the next section.

Keep in mind that learners are following this pathway by choice when they are on it, not by being controlled by the instructor. Make sure that all design choices reflect choice and not control. Having learners review designs for the instructor-centered modality might be a good way to examine content for bias as well.

The Learner-Centered Modality Design Phase

While some may see the learner-centered modality as the easiest one to design, the truth is that it requires a lot of effort to not codify existing biases into the design - especially for those with more power and privilege that enjoy the freedoms that learner-centered options can afford them. Rather than looking at this modality as one that just sets learners free to do as they like, we should look at it as the modality that ties together many learner pathway options. This part is more of a fuzzy area, but there are a few suggestions for this modality below.

- **Deconstructing “Instructor-Led”:** In order to form some guidelines / scaffolding / suggestions for the learner-centered modality, one recommendation is to take any course goals, objectives, and standards and break those down to the smallest parts possible. For example, take a performance objective, remove the conditions and criteria, and all that is left is the main part needed for learners: the behavior or idea that learners are to study. Turn this into a very open-ended competency and let it serve as a guide or idea for the week / module in the Neutral Zone. Let learners deconstruct it even more if they don't connect with it or think it works for them.
- **Communication:** One of the important aspects to analyze in designing the learner-centered modality is the ways that modality options are communicated. Those with educational backgrounds can too easily slip back into communicating definitive instructions that make all learners feel like they have to follow them. Language can also communicate unexamined power dynamics and intersections that stifle pathway mapping rather than help.
- **Flexibility and Choice:** The key feature of this modality is to add flexibility and choice. Some learners will be ready for this, others will not. Course design will need to walk a fine line between giving some ideas or guidance to help those who aren't quite ready, while making room for those who are ready. Much of this will happen in the Neutral Zone. Some learners have found the concept of an activity bank of assignment suggestions helpful, especially if instructors get permission to include examples of pathways different learners have created in past courses.
- **Assessment:** Typically, the best methodology to approach grading in SMLP courses is ungrading (see Bali, 2019a; Fasheh, 2000; and Stommel, 2020) with feedback and discussions of outcomes. Journaling, portfolios, and other forms of authentic assessment can be helpful with this. Learners will probably also more than likely need to take partial or total control of creating guidelines for assessment / feedback / grades. Also, any documentation of pathways maps can help (see next section). The main difficulty in this area is that assessment of any kind will need to cover both the instructor-led modality and the learner-centered modality (and all of the options this creates). Qualitative rubrics with open-ended criteria could help here, especially in the context of institutions that require instructors to be the ones to give grades. Qualitative rubrics in the context of SMLP would not focus too much on the details of what learners did for assessment (like word counts, and paper structures), but on how the learner provided proof that they have learned or accomplished something. It wouldn't be a list of micro-managed point values, but a chart with open sections to provide thoughts and feedback. There are also other ways to think about documenting the learning process in SMLP. For one example, see “Documenting Customizable Pathways” (Hall, 2017).

The Learning Pathway Map

The main activity for most learners should be the creation of a learning pathway map. This, at a minimum, would contain a description of what they plan to do to learn the topic, what resources they will need to learn, and how they will prove they have learned what they say they have. It may be a copy of the instructor-centered pathway, a mixture of the two modalities, or something else. The key is for learners to engage with the determination of what they will learn, as this is the core of heutagogy.

However, since learners may find it difficult to plan too much in advance, initial mapping should focus on general goals for the entire learning experience. Weekly (or module-based) focused mapping activities can help work out the specifics and details of learning maps. Be sure to make space for initial mapping at the beginning of class, while also including weekly time to focus, revise, and reflect on specific mapping choices.

Keeping in mind that these maps are not rigid, learners can expect to change their minds as they follow their own map. This level of agency and control can be daunting for some learners that are not used to it, so instructors will need to exercise patience, encouragement, and understanding as learners work through the process. Instructors should probably take notes about what does and doesn't work in their role as guide and encourager throughout each offering of their learning experience.

There are a wide variety of ways to accomplish the mapping of individual learning pathways. These will generally involve some form of technology. This could be as basic as a pencil or paper, digitally supported through a WordPress blog or Word document, or a combination of technologies like mind maps. If online technologies are utilized, please keep in mind that there are pros and cons to every service. Technology is not neutral; there are contexts of power dynamics,

biases, and privacy concerns built into every single tool that need to be examined (see McMillan Cottom, 2019). Many technology companies engage in oppressive surveillance techniques that affect different sociocultural intersections to different levels of severity (Gilliard, 2019; Noble, 2018; Watters, 2019). Learners should be fully informed of every issue that could possibly arise from using data generating and collecting tools online, as well as options for opting out.

For one idea on how to use various tools to map pathways, see “Creating a Self-Mapped Learning Pathway” (Crosslin, 2017). Note that the tool in that example is gone, highlighting the precarious nature of using technology like this. However, the ideas within the post can still be implemented across a wide range of tools.

Instructors can also experiment with different ways to present mapping options and the neutral zone. These new tools will also possibly introduce accessibility issues in addition to privacy and power dynamic concerns, so please make sure to consider these aspects and communicate issues clearly to learners. For an example of one idea that utilizes H5P and Twine micro-lessons, see “Building a Self-Mapped Learning Pathways Micro-Lesson: H5P vs Twine” (Crosslin, 2019).

Reflection and Analysis

In conjunction with the mapping activity, learners should be encouraged to reflect on why they made the choices they made: why they chose the options they did, why they followed their map the way they did and why they made the changes they did. Encourage them to reflect on power dynamics, intersectionality, and sociocultural factors that impact on their learning.

In order to not overwhelm learners, make sure there is time within the class schedule to reflect. There could even be three levels for the final reflection: one level for themselves, one level to prove to others that they learned what they say they did, and a final level that could be shared with other learners (with permission, of course). The first level can be wide, lengthy, and as deep as needed, since it would be primarily for the learner themselves. The next level could be based on competencies, goals, course activities, and other contextual requirements (like institutional grading requirements). The third level of reflection could theoretically be gathered in a repository to help future learners in their learning pathways mapping. If different learners reflect on the various intersections in their life and how that affects their learning pathway, those with similar intersecting aspects could find guidance for mapping their own pathway. Seeing how other learners like themselves navigated the course previously to explore something outside of the average pathway could help encourage others to make these choices as well.

SMLP and Equity

As this chapter is practical in nature, examination of important mindsets critical to implementing SMLP equitably cannot be addressed fully. However, SMLP was conceptualized to address some concerns raised by critical pedagogy (see Freire, 1996 and Hooks, 1994 for more about critical pedagogy). Therefore, some of the core social justice mindsets that are needed to empower heutagogical pathway creation need to be noted. These include:

- **Allow each learner to center their unique intersectionality.** Intersectionality is a term that was coined by Crenshaw (1989) as a critique of power dynamics that ignored the unique oppression of black women. Each learner will have a unique intersection of sociocultural characteristics - SMLP works best when each learner can center their unique intersection rather than those of the instructors or other learners. Indigenous Pedagogy brings an important perspective to this by seeing each learner as a “potential knowledge-keeper and teacher” based on the Indigenous value that “all members of a community have knowledge to share” (Restoule & Chaw-win-is, 2017, p.12).
- **Avoid the temptation to re-center dominant identities.** Mehran (2019) points out how white males can often reframe and re-center intersectionality back on themselves. Instructors of any sociocultural background can possibly do this as the one in charge of the course, so instructors must avoid re-centering themselves in SMLP course design.
- **Because of historic educational power imbalances, learners may not be aware of their capabilities.** Bali (2019b) makes an important point about Capability Theory that can guide the development of SMLP courses: “one’s surrounding environment can limit someone’s capacity to practice what they are capable of.... we must recognize that marginalized people, when given agency and choice, may not be able, at first, to make good choices because of the hegemony of the dominant worldview narrowing their vision on what is possible for them” (para. 14). In other words, learners may need help and encouragement to step outside of the single linear pathway that they are most accustomed to from their past.
- **Don't forget to keep all aspects of the SMLP course accessible.** Because SMLP courses can be seen as “experimental,” the temptation exists to jump in and not design for accessibility. Make sure this does not happen. See Thurber and Bandy (2018) for a good summary of accessibility and design in online courses.

Conclusion

This chapter set out to examine some of the practical ways to create a course that implements the heutagogical goal of learner agency. Because many people are typically not taught how to be a learner, the SMLP design methodology was presented as one method to facilitate a course that allows learners to map their own pathway as a means of achieving agency. Learners are given the option to choose from a pre-determined instructor-centered pathway, or to create a pathway of their choosing. This includes mixing in parts of the instructor pathway if they so choose. Giving learners these options allows them to center their unique intersectionality while also individualizing the amount of support they need from the instructor based on their personal capabilities. But because the choice is in the learners' hands, they retain agency over exactly what they need.

While there has been some research conducted on SMLP courses, much is still unknown about how learners navigate these spaces. Additionally, technology tools that allow for mapping - while also protecting privacy - are few and far between. Future work in the SMLP realm will include research into what course designs and mindsets encourage more learners to step away from complete reliance on the instructor in the course. Additionally, work continues to find or create tools that will allow learners to create a learning pathway map, follow and adjust that map, and then reflect on the entire process at the end. Hopefully this chapter has served as a springboard to using SMLP to integrate heutagogy into the learning process.

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Chapter 7

Supporting Learner Agency Using the Pedagogy of Choice

Emma O'Brien & Jean Reale

Universal Design for Learning

Heutagogy

Learner Agency

pedagogy of choice

problem-based learning (PBL)

This chapter investigates how to support the pedagogy of choice as a means of developing learner agency. In this case study, 30 preservice student teachers participated in a hybrid pedagogical approach combining heutagogy, problem-based learning (PBL) and universal design for learning (UDL). The aim was to support learner agency by providing an environment that nurtured self-determined collaborative, authentic and ill-structured learning. The approach illustrates new opportunities in higher education teaching to bridge the gap between traditional content-focused, discipline-centred teaching and the demands of our increasingly fast paced, collaborative and technology-driven society and working environments. The study found that the students enjoyed having choice, however, experienced high levels of anxiety in exercising agency. The need for additional scaffolds to alleviate anxiety was highlighted, in particular information literacy skill building exercises, increased reflection on the learner's experience and emotion to promote self-regulation and to nurture self-reliance and learner confidence. Further consideration needs to be given to encouraging agency during the provision of professional development for higher education educators, particularly in the context of risk taking, opening teaching approaches and articulating metacognition around their teaching decisions to students to facilitate the modelling of agency in the educational system.

Education is the process of training man(sic) to fulfil his aim by exercising all the faculties to the fullest extent as a member of society.

— Aristotle

The implications of learner agency in today's society

Due to the rapid pace of change (Puncreobutr, 2016), 21st century society demands new skillsets, in particular the ability to adapt, problem solve, self-appraise and collaborate between disciplines and geographical locations (Paccagnella, 2016; OECD, 2017). These skillsets are often in stark contrast to those promoted in traditional educational systems. Such systems are largely siloed, and content focused, teaching individuals' discipline-centred skills which allow them to succeed in a specific career path (Costley & Dikerdem, 2011). Success is largely dependent on the ability of students to demonstrate prescribed learning outcomes for which they are awarded grades.

To bridge the gap between traditional education and the needs of 21st century society, students need to learn how to adapt to change by making informed choices about their own learning through agency. Educators must provide a safe

space to urge students to take an active role in their learning, encouraging them to pre-empt problems, self-assess their skills level, identify their own learning outcomes, and adapt their skills (European Commission 2015; Savickas & Porfeli, 2012). In addition, educators must model agency by taking risks in their teaching, allowing themselves to be vulnerable, empathetic, and being open with their students (Hase, 2014, 2017).

If we encourage students to embrace their agency, we not only inspire them but empower them. Every environment has the potential to be a learning environment, and successful students will be the ones who have the skills to adapt (learning) environments to their individual needs. Therefore, learners' must understand their strengths and challenges and identify strategies to support their learning. Therefore, we need to foster self-determined learners who can monitor their progress and make connections with prior learning (McClaskey, 2016).

Pedagogies that support learner agency

There are several pedagogies that support learner agency. This chapter will explore a hybrid of problem-based learning (PBL) and universal design for learning (UDL) to apply heutagogical principles, enhancing learner agency in today's higher education system.

Problem-based learning (PBL) and learner agency

Problem-based learning (PBL) is a learner-centred pedagogy that reverses didactic education. Students explore ill-defined complex scenarios, and then identify and develop the knowledge needed to address such through a collaborative seven step process, adopting one of several team roles (Helelä & Fagerholm, 2008; O'Brien et al., 2019a).

In groups, learners meet regularly to reflect, self-assess and provide feedback to their peers. Educators guide learners through the process and emphasise that PBL is not concerned with wrong or a right answers, encouraging learners to articulate their thought process for their approach (Helelä, & Fagerholm, 2008). Many of these tenets align with heutagogy particularly the focus on process, self-direction, collaboration and authentic learning (Blaschke, 2012; Hase & Kenyon, 2007).

In the initial stages, PBL learners experience a high level of anxiety (Fiddler & Knoll, 1995). Studies have also shown that there is a high drop-out rate particularly with distance and online PBL, learners cite challenges regarding identifying knowledge gaps, how to approach the PBL process, and working collaboratively. However, learners have emphasised the positive impact it has on understanding how they and others learn, thus developing self-awareness (O'Brien et al., 2019b).

The high dropout rate in the initial stages of PBL illustrate that it is far from perfect. The student experience needs to be supported to alleviate anxiety and to encourage students to embrace uncertainty to enhance their learning. In particular within PBL, we need to.

- Make learners aware of how they learn, their learning preferences and how these impact their peers, support group work and metacognition, and nurture the heutagogical principles of self-awareness and self-direction.
- Develop skills to provide opportunities for learners to appraise their own work and that of their peers, empowering students to work more effectively in groups and facilitating the heutagogical principle of collaboration and assessment.
- Creating an awareness of how learners approach PBL to alleviate uncertainty (Gibbins et al, 2015), while encouraging self-appraisal and articulating metacognitive processes to support learners to adapt their approaches (Zimmerman & Schunk, 2001, p.5) and thus applying the heutagogical principle of reflection.

This chapter will explore how PBL can be integrated with UDL to nurture learner agency to empower 21st century learners.

Universal design for learning (UDL) and learner agency

Universal design for learning (UDL) is a framework that provides ALL students with equal opportunities to learn (Rose 2002). The three principles of UDL CAST (2018) provide a framework so that curricula and instruction are designed to be accessible and engaging. These principles are:

- **Multiple means of engagement.** Stimulates motivation and sustained enthusiasm for learning by promoting various ways of engaging with materials.
- **Multiple means of representation.** Presents information and content in a variety of ways to support understanding by students with different learning approaches/abilities.
- **Multiple means of action/expression.** Offers options for learners to demonstrate their learning in various ways, e.g., allowing choice of assessment type.

Furthermore, students are encouraged to take ownership of their learning from an early age. This supports the concept of heutagogy where the learner is at the centre of the learning process rather than the teacher or the curriculum (Hase, 2014).

Novak (2019) explores how UDL allows educators to remove barriers to learning by offering voice and choice. When we provide students with agency, we encourage them to be more engaged and creative. This, in turn, produces education that's more equitable and inclusive.

However, when UDL is adopted, it is largely through a design framework and is not made visible to learners. UDL needs to be made explicit by leveraging it as a conversational framework to discuss learner incomes, in particular their motivations, preferences, and strengths, so they can adapt the learning environment to meet their individual needs. By using the UDL framework in this way, educators can accept learner variability as a strength to be leveraged, not a challenge to be overcome (Rose & Meyer, 2002). In addition to providing a design framework, UDL also contributes to the construct of student-centrism by emphasizing the role of UDL in the development of "expert learners" (Meyer, Rose, & Gordon, 2014).

The earlier that the principles of UDL are introduced to students, the greater are the opportunities to support the development of key skills for independent learning. This develops individuals who have the ability to curate and process knowledge and make informed choices about their learning needs and outcomes to ensure they achieve their full potential as learners.

UDL is largely dependent on the individual learner focusing on themselves and their needs. In collaborative societies, learners need to become aware of the impact that their individual preferences have on their peers and their environment. To date, UDL has not been explored as a means of applying heutagogical principles and facilitating learner agency. Combined, UDL and PBL can extend the development of learner agency to collaborative and authentic environments. We call this the pedagogy of choice which empowers and enables learners to make informed choices regarding their learning.

Pedagogy of choice

The pedagogy of choice has been referred to in various contexts. Bali (2019) defined the pedagogy of choice as a 'pedagogy or curriculum that has many opportunities for learners to make their own choices' (para. 3). Furthermore, Cummins (2009) argued that choice requires educators to challenge their assumptions regarding the current learning environment, particularly with a view to the role of the learner – students make decisions regarding what and how they learn. However, the provision of choice for learners is simply not enough; we need to support learners to develop a specific skillset to aid decision making, while applying the pedagogy of choice in practice. It is important to develop students' skills in self-awareness, decision making and metacognition to develop their confidence in forming their own learning pathway and nurture their transition from dependent to independent learners.

Previously, we looked at two pedagogies that facilitate learner agency. PBL is process-based and collaborative, focusing on engaging learners in multidisciplinary authentic learning experiences. However, learners often feel underprepared regarding their redefined role. UDL develops the expert learner but is limited to individual preferences and choices. It does not consider pedagogical approaches such as collaborative learning, uncertainty, and authentic learning. Furthermore, UDL is largely a design framework and needs to be made explicit as a conversational framework to encourage learner self-awareness and foster agency.

The pedagogy of choice (Figure 1) combines PBL and UDL to scaffold the students learning experience through a self-determined process of collaborative, authentic, and ill-structured learning. UDL provides opportunities for learners to consider their learning incomes through dialog (what they bring to the learning environment and what they want from it). When used transparently, UDL encourages the learner to become self-aware of his/her own preferences and how these can impact engagement with other learners and with the learning process. PBL empowers learners to make both individual and collaborative decisions, reflect on these, and explore how their learning can be applied to multiple contexts. UDL further scaffolds the experience of how learners use and express their knowledge. This holistic approach nurtures agency by providing opportunities for learners to determine their preferences, needs, and how they interact with others and the learning environment.

The next section illustrates a case study on how the pedagogy of choice has been applied in practice.

Case study on the application of the pedagogy of choice in developing learner agency

This section describes how the pedagogy of choice was applied within the constraints of the current HE system.

In September 2019, a third-year undergraduate module in educational technology was redesigned to enhance learner agency. As educational technology is constantly changing, it is difficult to teach students all technologies they could potentially encounter. Therefore, the module was adapted to empower learners to identify and critique the relevant technologies to be used in authentic contexts and how to apply these using pedagogical best practice. The class consisted of 30 students who had participated in work placement the previous semester. To align with the pedagogy of choice, the module was redesigned as follows.

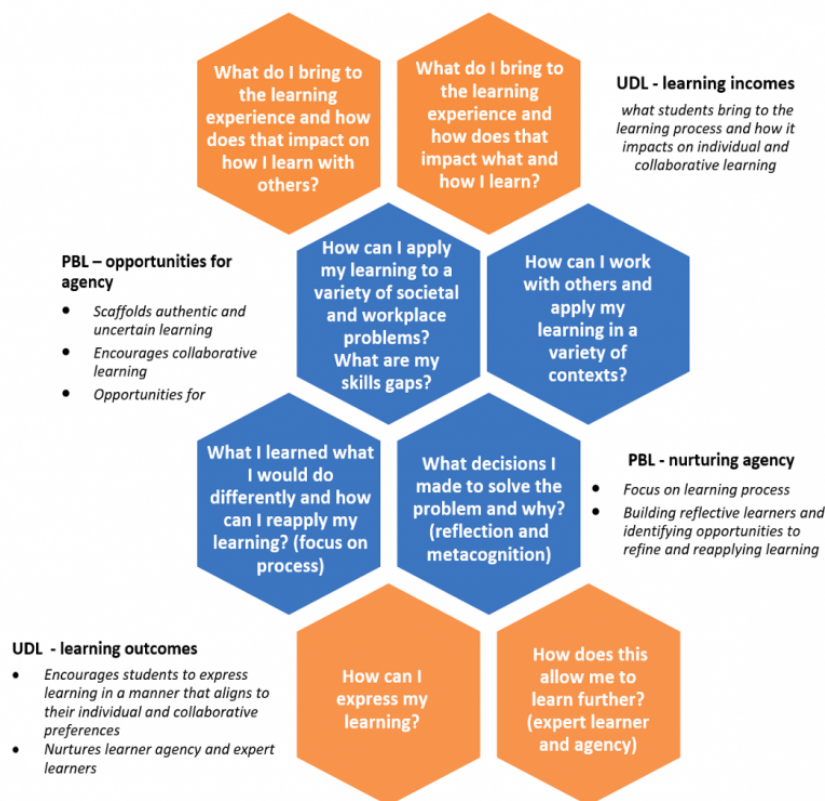
Identification of learning incomes. Firstly, learners participated in a poll expressing their motivation for engaging with the module and the challenges they experienced in work placement. Based on the results, the class discussed how digital learning technologies might address some of the challenges they faced. This made the module more appealing to the individual learners' preferences, which aligns with the heutagogical principles of self-direction and reflection.

Providing opportunities for agency by incorporating authentic inquiry-based learning. The lecturer then developed a trigger which represented an authentic problem in the workplace. The learners were asked to develop a plan and a digital resource to address the problem. Learners could choose a topic they wanted to focus on. All students choosing the same topic formed a PBL group, which aligns with the heutagogical principles of collaboration and exploration.

Nurturing agency by emphasising the importance of process. In PBL, the focus is on the process and not the outcome. Therefore, learning outcomes were rewritten to value learning processes rather than learning products. For example, rather than using a particular type of technology, learners evaluated how a digital resource can be effectively used to meet the needs of a group of learners. This aligns with the heutagogical principle of capability (Blaschke, 2012; Hase & Kenyon, 2009).

Figure 1

The pedagogy of choice: A hybrid of PBL and UDL.



Providing opportunities and nurturing agency in everyday teaching. Each week learners participated in:

1. **A lecture** discussing PBL, UDL, assessment and feedback literacy and peer feedback.
2. **A PBL tutorial.** Students met each week in their PBL groups to develop a plan and a digital resource for the PBL trigger. Students completed one of the seven PBL steps each week. Each group was provided with an online collaborative space to complete each step of the PBL process. This encouraged students to continue their collaboration outside of class or for those who struggled with face to face expression, to contribute through alternate channels.
3. **A lab.** Each week, a lab was provided on a different type of digital learning technology. Learners were given a poll each week and voted on the technology they would like to explore in the proceeding lab. Lab sheets and videos were provided, and the students worked at their own pace, collaborating with each other and asking the lecturer questions as needed.

In the PBL classes, we discussed the PBL process, how we might approach the trigger, and how students could evidence their learning. Lectures were largely discussion based. To illustrate the importance of process rather than product, the class evaluated different types of educational resources and discussed how everyday technologies could be used in different ways to enhance learning.

The UDL classes were discussion based and were concerned with creating self-awareness. In the context of UDL principles, we discussed: How would you like to learn in the context of UDL principles, how you would like to demonstrate your learning, what ways would you like to express this, and how would you like to engage with your peers in class and the lecturer? The last topic to be discussed in class was how the students' learning preferences could impact the PBL group and how they collaborate, express and engage with each other. This allowed UDL to be made explicit and extended it beyond the individual. It encouraged self-awareness of how students learn individually and collaborate in groups. This encouraged learners to be empathetic towards their peers when working in groups and allow them to adapt the learning environment to their own individual and peer learning needs.

Assessment literacy classes encouraged self-appraisal, learners graded written sample assessments, and discussions were held regarding how they might express their learning in different forms, e.g., as a video, diagram, and/or podcast. The class discussed what good design plans and digital resources might look like.

In the peer assessment classes, learners developed a peer evaluation sheet in their PBL groups to encourage them to critique digital resources. Sample scenarios of peer feedback were given to groups, and discussions were held about what peer feedback might be useful and what might not. This developed self-appraisal skills.

Finally, learners engaged in peer learning as part of the assessment process. Each group presented their digital resource and were allocated a group to review. Marks were awarded to the peer reviewers regarding their ability to critique the design and pedagogical use of a digital resource.

Learning outcomes: Modelling UDL in practice

In addition, the module was delivered in line with UDL principles, and this was made explicit throughout. The lecturer explained the rationale for why they were delivering the module in the specific manner and how it aligned to UDL principles.

1. **Multiple forms of representation.** Each week lab material was available in text, video, and podcast form. Learners could choose to physically attend class or view pre-recorded material online.
2. **Multiple forms of engagement.** In class lectures, learners could contribute via a poll. Learners could choose to meet face-to-face or work on the problem using technology mediated spaces provided by the lecturer. PBL groups could collaborate with each other at each stage of the PBL processes using text, video, or audio.
3. **Multiple forms of expression.** Learners could choose their mode of assessment, and they could choose to submit their assignment through text, audio (podcast), or graphically (info graphic or poster).

Challenges

Content provided in lectures was largely focused on building learner confidence and self-awareness. Therefore, learners had to identify and gather the learning material required to solve the problem trigger, and they experienced a number of challenges in transitioning to such a learner-centred approach. In particular, students found it difficult to exercise their agency when making choices regarding what to learn, how to learn, and how to express their learning in relation to the module. They relied largely on the lecturer to help them to make what they perceived as a 'right' decision. Also, despite scaffolding of the PBL process in lectures and through tutorials, learners struggled with how to approach the problem trigger, specifically in choosing what elements of the trigger to focus on and how to decide on the best approach to meet the needs of the problem trigger. We adopted a questioning approach to encourage students to articulate their metacognitive processes. For future iterations, providing examples of solved PBL triggers and prompts for metacognition could potentially provide additional support through the PBL process. Also, providing classes in information literacy to encourage learners to identify their knowledge gaps and guidance on how to fill these may have helped build learner confidence in exercising agency. To exercise their agency further, students could potentially develop their own problem trigger.

In addition, learners were encouraged to choose their mode of assessment and found it challenging to identify how to express their learning in different ways. Assessment literacy classes focused on exploring written modes of assessment and discussing how they might be conveyed in different ways. Further scaffolding, by providing examples of assessments in alternative modes and asking the students to provide feedback on these, may assist with addressing some of the challenges. Both assessments were weighted equally. The high stakes associated with these assignments may have inhibited learners to take perceived risks regarding their mode of assessment. Introducing shorter formative assessment, which are lower risk, to encourage learners to experiment with a variety of modes could build confidence.

Lastly, learners struggled regarding peer reviewing and feedback which lacked depth and was mainly positive. Providing opportunities for learners to generate feedback on their own digital resources or digital resources that were developed by individuals beyond the classroom may build critical thinking skills in a safe environment. Furthermore, discussing how an individual might interpret and apply this emotionally and logistically could facilitate self-appraisal and self-regulation.

Conclusion

This chapter explored a case study in which a hybrid of PBL and UDL were applied in higher education to facilitate learner agency through the application of heutagogical principles. UDL was used to nurture self-awareness in the student group, encouraging learners to consider their learning incomes from the perspective of their individual and collective needs. This prepared learners for engaging in a PBL, through a collaborative, ill-defined learning environment which they will experience in the world of work. PBL provided opportunities for students to exercise their agency and nurtured this through process-based (rather than content-based) learning, self-reflection, and metacognition, thus further developing their skills. This provided learning outcomes which valued learner agency and diversity rather than 'right' or 'wrong' answers.

Overall, the students enjoyed having choice, however, experienced high levels of anxiety in exercising agency. Additional scaffolds need to be provided to alleviate learner anxiety, in particular the use of examples, the integration of information literacy skill building exercises, and increased reflection on the learner's experience and emotion throughout the process so they can self-regulate and adapt to build reliance and learner confidence. Further consideration also needs to be given in encouraging agency during the provision of professional development for higher education educators, particularly in the context of risk-taking, opening teaching approaches, and articulating metacognition around their teaching decisions to students in order to facilitate the modelling of agency in the educational system.

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Chapter 8

Help Me Put on This Jetpack: Propelling Learner Agency at Learnlife Barcelona

Devin Carberry

K-12

Program design

positive relationships

Self-Confidence

self-management

Self-Determination Theory

The ability of learners to successfully exercise agency depends on four key elements: positive relationships, self-confidence, self-management, and program design. Psychological safety and unconditional positive regard are the bedrock of the positive relationships that enable learners to progressively take more agency. Self-confidence paired with self-management skills enable learners to feel competent drivers of their own learning. Program design, based on voice, choice and self-determination, further creates the opportunities for learners to practice agency. This chapter examines the practical application of these four elements in the Learnlife Barcelona Urban Hub's full-time program, which serves learners aged 12-19.

Introduction

In 2016, Learnlife set out to create the school model of the future. We analysed over a hundred innovative schools, spoke with thought leaders the world over, and surveyed thousands of people about what their dream school would be like. Over the course of a year and a half, we used this data to design our model – one predicated on cultivating lifelong, self-determined learners. In 2017, Learnlife launched its first full-time cohort of seven learners, aged 14-20, who would take the reins of their own learning – deepening their passions, discovering new ones, and working on projects relevant to their lives. We believed that learner agency was a matter of giving learners the freedom to choose what, when, and how they learned. Of course, lofty visions rarely withstand the stress test of real-life learners.

Challenges to learner agency surfaced such as the defaulting to control models instead of empowerment-based ones, low self-efficacy, choice paralysis, and lack of trust. Through this experience, we have learned that learner agency is buttressed by four elements: positive relationships, self-confidence, self-management skills, and program design.

Positive relationships

Learning happens best when we have strong relationships and when we feel safe (Gibson & Harris, 2019a). At Learnlife, we enable learners to take initiative and risks, and feel supported along their journey. We do this by training our learning guides^[1] in positive relationship building, pastoral care programs, learner-driven feedback, and protocols to enhance psychological safety.

Fifteen-year-old A exemplifies how positive relationships are the gateway to successful learner agency. In my first conversation with A., he explained that he was coding artificial intelligence to track cloud patterns for indications of changing weather. Everyone expected that A. would excel at Learnlife – producing projects at a level that we had not yet seen in our short history. Three months later, A. had produced very little. He revelled in helping others and was cheery and participatory. Yet, he eschewed doing his own work, resisting attempts to develop his project management skills. Why did A flounder when given agency?

Fast forward twelve months. A. runs a coding club and is paid to run an afterschool maker program. He has been contracted by a psychiatrist to help organize her files using machine learning. Before he was reluctant to talk about his future, but now he is actively creating a pathway towards university. Furthermore, he now completes the projects he proposes. Recently, he designed an electric bass guitar, 3D printed the body, and installed all the electronic components. A is on fire! So, what changed?

A needed unconditional positive regard from the people in his life. He needed to know that it was safe to be vulnerable and was valued for more than what he contributed. Through the power of positive relationship, A. eventually gave us permission to point to the behavioural patterns stunting his progress. He began practicing more self-care and seeing his self-worth as independent of what he could do for others.

How we build positive relationships at Learnlife

Intake

When learners join Learnlife, relationship-building starts with the intake process. Our “getting to know you” conversations aim to understand learners at a deep level, covering prior school experiences, the people with whom they are closest, their challenges with learning, and vision for their future. Unconditional positive regard and empathy are paramount (Jenkins, 2015). If a learner shares that he or she has been expelled, struggled socially, or has a screen addiction, we don't judge, but rather empathize with the situation and explore how we can best support the learner. Similarly, we interview parents so we have an even greater understanding of the learner. We've had several parents cry during these interviews because they said no-one had ever shown so much care for their child. The interviews are also an opportunity for the learners and their parents to get to know Learnlife before enrolling in the programs.

Psychological safety

Learners take agency when they feel safe (Delizonna, 2017). If they don't feel valued or don't speak up for fear of retaliation, they are less likely to take initiative, think creatively, or take risks. A positive relationship is inherently a safe relationship. So, how do we encourage psychological safety?

Feedback

One of the most vulnerable and, thus, unsafe feeling moments for learners is when they are evaluated. This is why Learnlife has chosen to focus on learner-led, constructive feedback instead of top-down evaluations. To promote psychological safety, all learners participate in a workshop on feedback, during which learners role play what it sounds like to provide clear, actionable feedback. We provide sentence starters for learners who are not sure how to phrase their feedback constructively. For example, a learner might start with “One opportunity I see for your next step is...”. This feedback is non-judgemental and actionable.

Learners also co-create rubrics for their projects that allow them to decide how they want to be evaluated. It can be overwhelming to receive feedback about all aspects of a project, especially if the learner has focused on only one or two. For example, a learner working on a short film might only want to concentrate on technical aspects of the film, not its content. Here, the learner feels safe, knows what to expect, and requests feedback.

When learners feel psychologically safe, they participate more, take more risks, and begin to shed concerns about vulnerability. Perhaps this is why B felt comfortable enough to share with us that she was disappointed with herself

because of how a project turned out. This level of honesty and vulnerability also helped B to recognize that her disappointment was affecting other aspects of her learning journey. She had started taking less initiative because she was afraid she'd end up disappointed again. Without a safe space to share, B. might have missed the opportunity to work through this emotional blockage to her agency.

Active listening

When we listen with an agenda in mind, learners know, and are less likely to share. If we want learners to take agency, they need to trust that we will listen to their ideas and struggles and do this without judgement (Bodie et al., 2015, p. 155). To help learning guides support learners during difficult times (such as Spain's Covid-19 lockdown), we organized several training sessions in order to role play our weekly well-being check-ins. During the role plays, in which one person played a guide and the other a learner, we noticed that whenever a "learner" presented a difficulty, we promptly wanted to solve it. Role playing potential scenarios that learners may encounter enables the guide to respond more effectively and empathically. If we begin by actively listening to learners while they recount their difficulties, a learner is more likely to share and be open to collaboratively finding solutions.

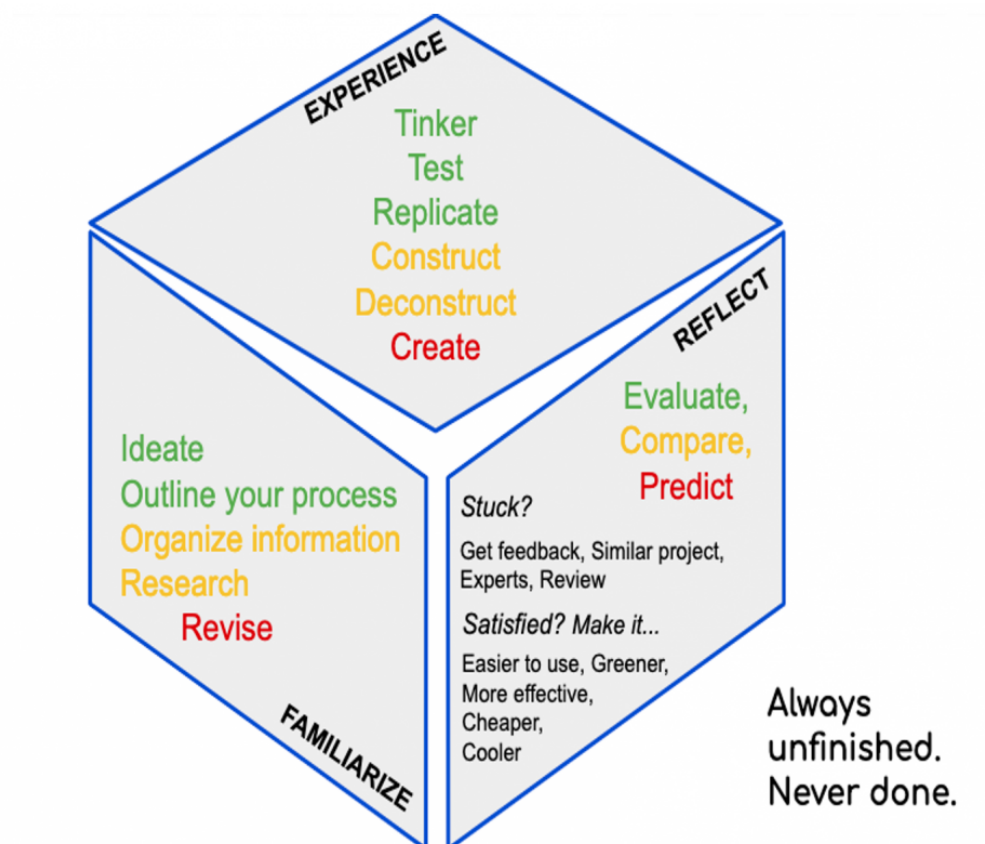
Guides not managers

Learning guides do just that, they guide. For all of us, it has been a struggle not to act as managers – assigning tasks, setting deadlines, checking progress. The shift from control to empowerment is not easy. We noticed early on that some learners tended to tense up during check-ins. They did not like having someone monitor their progress and compare it to the goals that had been set (even if they were the ones who set those goals). So, we shifted the focus from outputs to the process and experience of learning.

We use several tools to do this. The first is the Learning Process Framework^[2] which helps learners understand the experiential learning cycle (Figure 1). Learners move between three, mutually reinforcing phases: familiarization, experience, and reflection.

Figure 1

Learning process framework



For each phase, we have developed a series of questions learners can ask themselves to better understand how they are learning. Rather than focus on what they are doing, this tool asks learners where they are in the process and what they have learned. We also developed a deck of cards for when learners feel stuck. During check-ins, we ask if they are stuck or if they are learning. If they are learning, we talk about the learning process framework. If they are stuck, we put cards down that represent different types of stuck – physiological needs, emotional needs, relationship challenges, and/or not knowing what to do next. On the back side of the cards are suggestions for how to get unstuck. Before flipping to the back, however, we first ask learners for their ideas. For example, if a learner reports being unable to concentrate because she or he is hungry, we first ask them what might be solutions to that problem. Often, they just say “eat something,” but if it is a recurring phenomenon we might encourage them to think deeper about how often and when this happens, and what solutions they have already tried. If they don’t know, we flip the card and there are options like: “Make sure to always have a snack in your cubby,” “Ask Devin for something to eat (I always have snacks)”, for example. In this way, we move from a managerial to a guiding relationship. In the process, the learners develop important self-awareness and metacognition skills that grow their capacity for self-determined learning.

Twelve-year old C. is an apt example of the transformation that can happen when we shift from managers to guides. When he joined us, C had a “too cool for school” attitude. He expected us to chastise and punish him like his previous teachers. He constantly tested us. When an activity required everyone to stand up, he would sit down. When everyone was working on a collaborative task, he’d goof around. In the last six months, C has transformed. He takes responsibility for his learning – designing his own schedule and documenting his process. He is excited to finish tasks he starts and actually complains when others are not doing their part and demonstrates higher levels of leadership and self-management. For this transformation to happen, C needed to believe that we had confidence in him. He saw that he could make mistakes and that we would ask about his process instead of punishing him. It was then that he began to take charge of his learning.

Agency implies believing in yourself

Self-confidence

It is difficult to have agency if you don't believe in yourself (Mercer, 2012, p. 43). Many of our learners arrive with low self-confidence because test scores or teachers have questioned their intelligence or neglected their strengths. At Learnlife, we have replaced grades with constructive feedback, and we have replaced exams with 360° presentations at which we celebrate learners' growth. All aspects of our programs aim to help learners cultivate a positive, strengths-based self-narrative.

Upon joining, D could not get out of bed in the morning because she was so depressed. We were lucky if we saw her once a week. During her intake interview, we asked her about her goals. She shared that no one had ever asked her that. Just asking helped her to see possibilities where previously she had seen none. On the days D came in, we didn't pressure her to engage in the same way as other learners. Rather we listened to what D needed in that moment and did everything we could to boost her self-esteem. If taking ten photos was all D felt capable of doing that day, that was okay. We would give her positive feedback, and encouraged her to share them with her peers, who also did the same. D felt guilty about her sporadic attendance, so we sat down and looked at the data with her. Were there any patterns, we asked? She realized that she always missed Monday mornings, and realized that if she felt like she did not have enough time to get ready and to eat breakfast, then she would not come that day. We co-created new schedules for her taking these parameters into account. It empowered her to feel in control of her life again, and slowly her attendance improved.

Through listening to D's concerns and encouraging her to advocate for her needs, she eventually gained the confidence to tell her dad that she wanted to see a therapist, even taking initiative to make the call herself. With her therapist's collaboration, we were able to clear some of D's emotional blockages and enhance her self-esteem. After two years with us, she planned a solo trip to the south of Spain and independently planned the logistics and itinerary, helping her to see herself as capable and self-empowered. D. also committed to taking her next step: photography school. She started the following autumn.

Like D, many learners arrive with low self-confidence. We employ a variety of strategies to bolster their self-efficacy. Day one of each new cohort begins with a "Strengths Olympics". Through a series of fun challenges, learners discover their strengths and broaden their understanding of the word "strength". For example, we invite learners to find a partner and sit back-to-back. Each learner receives an image of an animal hybrid – an ostrich-alligator, for example – and describes the image to their partner who must draw it based solely on the oral description. In our debrief of the experience, we reflect on the variety of skills needed for this timed activity: listening, questioning, describing, visualizing, spatial reasoning, drawing, and speed. This is only one of nearly a dozen "Olympic" events testing everything from dexterity to physical strength, from creativity to fashion sensibility. In this way, we shift from traditional models placing a premium on rote memorization to one that recognizes a broad spectrum of abilities.

After the "Strengths Olympics," we work with our learners who have developed negative self-narratives to create positive counter-narratives. One of our 13-year-old learners, E., who had been diagnosed with Oppositional Defiant Disorder, felt like all the messages he had heard about himself from his community were negative. We helped him flip this perception by asking those same people to describe all of E.'s positive attributes. He was shocked by so much positive regard.

Creating self-confidence by design

At Learnlife, a large part of the day is spent in our learning studios: multimedia, digital fabrication, carpentry, writing, electronics, and several more. Before learners can work on independent projects they must first complete different levels for that studio. Each level is designed according to our learning framework. Learners familiarize themselves with a core skill or concept, then experience it through executing a task and then reflecting on what they learned. For example, one of the task objectives of Level 1 for the Food Lab is that learners conceptually understand emulsions and can create them. To familiarize, they first learn what an emulsion is via prepared video content; next they make a salad dressing that requires an emulsion; then they reflect on how the concept of emulsion could be applied to other types of

dishes. In this way, we are not just teaching learners to execute recipes but to think creatively about food as well as their own projects.

We require these levels because we want learners to develop the creative confidence that enables them to turn their ideas into reality. In our first two years, we invited learners to launch directly into ambitious projects. Most of the time, the learners did not have the core conceptual knowledge nor the technical skill to execute the project, often causing frustration and self-doubt. For instance, one of our learners wanted to create a portable water desalination kit. The project was to last three months. However, there was so much to learn about desalination and product design, that he only managed to put together a couple prototypes to test basic concepts of desalination. As a result, he was dissatisfied with what he had accomplished and abandoned the project.

Through hands-on, interactive challenges supervised by our studio experts, learners grow their creative confidence by learning technical skills needed to successfully launch their own projects. Take for example, 17-year-old F who, due to learning differences, was reading and writing at an early primary level. She avoided most tasks that involved either reading and writing and was often frustrated because Google Voice did not recognize her accent. The Writer's Lab aims to grow learners' confidence as writers and demonstrate its power as a tool for self-expression. As F. worked through the tasks for each level, her view of herself as a writer shifted dramatically. Within a year of joining us, F. wrote four books. The first was about her experience of being adopted. The second about her first year in Spain. The third was a cookbook and the fourth a photobook. The books are showcased on a website of her design.

Self-Management

When a learner develops agency but does not have the skills to reach the desired outcome, the learner often becomes discouraged. Most classroom environments are predictable. They rely on a limited number of similar assignments or tasks with quick turnover and require formulaic outputs. When learners are given the opportunity to design their own learning journey, authentically collaborate, or work on real world projects, they often struggle because they have not previously been given the opportunity to develop the requisite skills to successfully execute these tasks (Gibson & Harris, 2019b).

We once invited learners to create a community building activity. They chose a camping trip. Planning the trip frustrated the learners as they struggled to delegate, ask for help, access the appropriate resources, and manage their time and their emotions. Upon arrival at our destination, it was time to make lunch. The learners had decided upon what to eat (sandwiches), created a budget, and purchased the food. The learning guides were instructed not to intervene but just to ask: "How can we help?" No one moved. Eventually, one of the older learners got frustrated and started bossing people around. He told them to get to work, but it was clear neither he nor they knew what that looked like. About an hour and a half later, with many hints on how to get organized, we were finally eating sandwiches. Why did the sandwich making seem like such an impossible task? The motivation was right: we were all hungry. The agency was there: they had chosen what to eat and purchased it. What was missing were adequately developed self-management skills like communication, emotional regulation, time management, planning, task initiation, and more.

Self-management workshops

All Learnlife learners participate in a weeklong self-management bootcamp and, thereafter, in ongoing workshops. In our experience, learners tend to resist learning self-management skills unless a few things are in place: established positive relationships, a growth mindset, and a concrete understanding of how these skills are beneficial. It is important to emphasize that the capacity to get work done is not something you have or don't have but, rather, it is a skill set that can be learned.

The first day of the self-management bootcamp is devoted to building learners' why. We start with a dramatization of two scenarios in which a learner is trying to get ready and out the door in the morning. In the first scenario, the learner has underdeveloped self-management skills. In the second, these skills are highly developed. One learner plays his- or her-self and another learner plays that learner's parent, while yet other learners personify the different self-management

skills. As they play out the first scene, the learners personify the different skills that make it impossible for the learner to get ready. For example, a learner plays her sense of organization and relays chaotic messages about how to get ready, another learner playing her sense of time tells her she has all the time in the world, her emotional regulation tells her to get back in bed, and her working memory can't seem to recall what she needs for her day at Learnlife. The scene restarts a second time with helpful self-management skills that make the learner's life smooth and simple. In the debrief, we ask learners to evaluate which skills they see as their greatest assets and which they would like to improve. We continue growing their why throughout the day, growing their self-awareness by testing their skills through a variety of challenges. We also orchestrate a panel of adults who talk about their difficulties with self-management and how they have overcome them. Lastly, they imagine what their lives would be like, if all of their self-management skills were high functioning.

The days that follow focus on specific skills and introduce self-management. For example, we introduce the skill of attention by offering opportunities to engage in activities like video games or Sudoku, during which we phase in different distractions (such as mobile phones, their friends, and background conversations). After each activity, learners evaluate the impact of each distractor. Then, we introduce the tool of workstations, which are designed to eliminate distractions. Some learners struggle with visual stimuli, so their workstation uses a trifold display to block out visual stimuli. Learners struggling with auditory stimuli use workstations with noise cancelling headphones. Each learner then builds her or his own workstation based on individual needs. It could be as simple as a to-do list and a laptop or as complex as a trifold with noise cancelling headphones, a personal whiteboard for drawing step-by-step instructions, and a writeable clock to chunk time for specific tasks.

While the habit-changing bootcamp felt challenging to many learners, almost all of them reflected on the benefits of improved self-management skills during their 360° presentations. Nineteen-year-old G, for example, shared her realization that self-efficacy is not just about having the right mindset, but that there are also strategies to improve her ability to learn. In the following weeks, these strategies were evident: a quiet space away from her friends; a workstation with a to-do list that included time estimates for each task; and a clock to keep her on track. In contrast to the analogue example of the workstation, we also adopted a project management application that grows learners' self-management skills. Through this app, learners have been able to build skills using calendars, GANTT charts, to-do lists, and a variety of other tools.

Agency by design

Once learners have the relationships, confidence, and skill to take agency, they need the opportunity to do so (Gibson & Harris 2019c). Everything starts with why. Our programs create space for learners to choose where they learn, what they learn and how they learn. We also provide formal and informal avenues for learners to provide feedback and even co-create aspects of the program. As a result, our learners report high levels of agency.

Figure 2

The learning journey: Explorers, creators, and changemakers



Choice

Learners start each cycle with goal setting. This approach gives them the agency to chart their learning journey and choose between workshops, projects, and internships that will help them reach these goals.

At Learnlife, we use building blocks for each program instead of courses. For example, we offer Life Navigation Skills (LNS) for learning literacy and numeracy through the lens of important life skills like creating a budget, passing a driver's test, or writing letters to potential mentors for internships. Each month, we provide a menu of choices for each building block. In the case of LNS, we have mapped out the skills, in consultation with the learners, that we believe are important to be a functioning adult in the world. Before each month-long LNS workshop, we select skills that have not yet been covered, and we invite learners to brainstorm and vote upon topics of interest that would allow them to acquire that skill. For example, for the skill of being able to cook for oneself, learners proposed a Master Chef competition. For each session, they needed to find recipes, create a budget, make calculations using proportional reasoning, make and then sell the dish at lunch. They learned a wide variety of skills and were deeply engaged because they got to do what most teenagers love: eat.

Most of the program building blocks are designed this way. Learners give input on what they would like to learn, and we create a menu of workshops based on those interests. Learners who have demonstrated adequate self-management skills can participate in the self-determined learning building block that they co-create with a learning guide. Learners can also facilitate a building block. One of our most popular workshops at the moment is a learner-facilitated workshop on writing horror stories.

Social learning

In their 360° presentations, learners often report feeling significantly more ownership, more responsibility, and an increased capacity to learn effectively once they have led their own workshop. For this reason, it is now a requirement for learners to lead an own workshop before they can transition to the next program group, e.g., from Explorer to Creator

or from Creator to Changemaker (Figure 2). The learning guides provide ample support in the design and often co-facilitate these workshops when requested.

When we first began with the workshops, learners only led workshops once a day, during the Adelante building block. Now, learners are leading workshops throughout the day from 12-year-olds teaching Russian to 14- to 19-year-olds, to peer-led discussions about toxic relationships, and from Dungeons and Dragons clubs to a workshop about single-variable equations. Nearly every learner has offered a workshop to her or his peers at some point during the year. This opportunity is a way for us to underscore the Learnlife belief that learners are capable of driving their own learning. It shifts the locus of learning from the guide to the learner. Take 16-year-old H, who led a martial arts choreography workshop. H., who normally slouches and hides behind his hair, became energized by the opportunity to share his passion for martial arts – so much so that he even had the courage to throw me over his shoulder (onto a mat, of course). Not only was he a fantastic leader in the workshop – capturing the attention of squirrely 12-year-olds and inspiring learners to stay for extra hours of practice – his leadership has extended into taking other leadership roles. In community meetings, he leads conversations and has advocated for us to reinstate reading time after lunch.

Reciprocal learning is present everywhere by design. In our studios, for example, learners who have completed a level are expected to help learners who are still working on that level. Once they have finished the three levels for that studio, they can opt for further training to become a studio intern, enabling them to use all the equipment and to support other learners' projects.

Twelve-year old J. is an example of how our ethos of choice, voice, and mutual aid enables learners to flourish. When she started with Learnlife, she was sceptical whether she would have increased choice and responsibility and that ultimately, she would drive all aspects of her learning. At first, she was antagonistic, testing whether we meant what we said. But when she realized that she was in charge of her own learning, she dove headlong into different projects, creating her own rubrics, deciding how fast to work or how much to do, and designing her own challenges. She has sped through the studio levels, wanting to go as far as possible. If there are twenty possible tasks learners can choose, but only ten are expected as a minimum, M does all twenty. More recently, she led the aforementioned single-variable equation workshop for her peers.

Conclusion and next steps

Learners exercise agency when they feel safe, when they feel capable, and when they feel connected to those around them. The opportunity to practice agency needs to be theirs to seize, and programs that promote voice and choice help to convert learners into agents of their own learning journeys. The descriptions above tell the stories of what Learnlife has accomplished in the last three years. Woven into the Learnlife DNA is the aforementioned mantra: iterate forward. As such, we are already brewing plans to take learner agency to the next level. For example, the shift to remote learning during the pandemic has highlighted the primacy of learner well-being as a stepping-stone to agency. As a result, we plan to deepen our focus on learner well-being, providing more tools and support to grow self-confidence and resilience. Also, the focus on executive function has largely been imposed upon learners. We are now working with learners to find ways for them to take ownership of this process – cultivating self-awareness of their needs and a strong enough impetus to grow. In addition, Learnlife plans to launch a restorative justice program this year, which will put learners' front and centre as the custodians of community well-being and conflict resolution. Finally, we also want to find ways to make our meetings as an organization more youth-friendly so that learners can begin to participate in decision-making at different levels of the organization. As we attentively and actively listen to our learners, this list is sure to grow.

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[1] To replace the term and antiquated role of teachers, we have adopted the term and role 'learning guide'.

[2] The Learning Process Framework is based on a similar framework created by Stonefields School in New Zealand



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Learner Agency in Distance Education Settings: Understanding Language MOOC Learners' Heutagogical attributes

Nikoletta Agonács & João Filipe Matos

Learner Agency

LMOOC

Self-efficacy

insight

framework

Self-Determination Theory

Learner agency plays a key role in self-determined learning (heutagogy) since, in heutagogy, the learner becomes fully responsible for the whole learning experience. Learner agency is further increased in online learning environments because learners require a great deal of self-regulation. Self-regulation and self-directedness are crucial aspects of learner agency and heutagogy: learner agency is perceived as learners' lurking potential for self-directed engagement. Learner agency emerges from the interaction of several factors such as self-concept, beliefs, motivation, affect, self-regulation and self-efficacy. Learner agency in general, and in the literature of heutagogy as well, is often studied within a qualitative framework, and research carried out with quantitative measures on attributes that contribute to learner agency is scarce. Our study's focus was to understand which attributes among self-efficacy, self-reflection and insight, and internet skills were statistically significant contributors to self-directed learning readiness of Language MOOC learners. Our findings highlighted that insight and self-efficacy were the most important predictors of learners' readiness for self-directed learning. As a result of this study, we propose a framework based on the empirical findings and the theory of heutagogy to help educational designers and course owners enhance learners' self-directed and self-determined learning attributes.

Introduction: MOOCs as heutagogical in essence

In an era when it is explicitly assumed that learning is no longer limited to the years of formal schooling but is envisaged as a lifelong process, massive open online courses (MOOCs) promised to fulfil (at least part of) the educational need of our postmodern society. Indeed, MOOCs are offering unrestrictive and unselective educational opportunities to learners worldwide. Online education has existed for many years globally as education institutions and private providers have tried to find ways to expand their markets. However, MOOCs brought in high-quality content from many prestigious institutions of higher education and structured the content into a course format through third-party providers such as Coursera, edX, Udacity, and FutureLearn, among others (Baggaley, 2013; Pappano, 2012).

Despite MOOCs claiming to be “democratisers of education”, they seem to have failed to achieve that role so far (Reich & Ruipérez-Valiente 2019). The identification of the source of that failure remains a crucial issue, though researchers have argued that one of the reasons can be lack of skills (Beaven et al., 2014; Khalil & Ebner, 2014). MOOCs are different

from other e-learning resources because of their massive and open nature (Terras & Ramsay, 2015). The learning situations based on MOOCs make more apparent the mediation role (in Vygotskian terms) (Vygotsky, 1986) of the resources used by learners. In the absence of the trainer/teacher, the learner's locus of control clearly shifts from the provider (the trainer/teacher) to themselves, thereby creating the need for their awareness of power and control over their learning so they become fully responsible for their own learning. If learners do not possess the relevant skills and do not become active agents of the learning experience to face such a shift that MOOCs represent, MOOCs will not be "open" to them (Terras & Ramsay, 2015).

According to Glassner and Back (2020), heutagogy is introduced when the intention is to empower people to become autonomous agents as learners, to motivate and stimulate learners to learn in a meaningful way and to help to bridge the gap between the hyperconnected social world and formal education. The fundamental and crucial idea is that, provided the proper environment, people could learn and be self-determined (Hase & Kenyon, 2007). Interestingly, most of the literature focusing on independent and autonomous learning in MOOCs employs the concepts of self-directed and/or self-regulated learning. Although, Terras and Ramsay (2015) have a different perspective, and they advocate that a heutagogical perspective is necessary to understand MOOC learners' psychological characteristics and that 'a heutagogical approach is well suited to MOOCs as it supports learners-generated content and self-direction in terms of learning path and information discovery' (p.480).

The MOOC structure is intentionally pre-defined, putting the responsibility on the learner as an adaptive organism. Therefore, an active role for the learner is highly relevant for learning in MOOCs. Pegrum (2009) calls for the development of participatory literacy, which is closely linked to the creation and sharing of user-generated content: although, the concept of participation per se entails more than creating and sharing. One must note that skill or competent action is not grounded in individual accumulation of knowledge. Instead, agency is defined in the context of action, and it is generated in the web of social relations and human artefacts that define the context of action. At the same time, engagement affords the power (and provides conditions) to shape the context in which the learner can construct and experience an identity of competence. Competence is a necessary ability for a learner to act effectively and efficiently to cope with tasks and problems. Connecting competence to the idea of an 'ability to act' echoes the structuring concept of capability and implies that the learner has legitimacy to act. Research suggests that, "a major problem with MOOCs is the lack of sustained engagement" (Terras & Ramsay, 2015, p. 477) and, therefore, claims that the burden of regulating and structuring learning is carried mostly by the student rather than by the instructor. This again calls for increased responsibility of the learner for engagement and participation, bringing in the associated need for certain competencies or skills.

Two fundamental ideas constitute the rationale to claim a heutagogical perspective when addressing MOOC-based learning. Firstly, the variability of learning profiles of MOOC attendants makes it impossible to accommodate the format, content, and rhythm to a one-size-fits-all model, then transposing a large part of responsibility of adaptation to the learner. Secondly, the flexibility affordances of a heutagogical approach faces the issue of conquering the learner and creating conditions for their very personal and individual engagement in action. This learner-driven approach seems particularly applicable to MOOCs, knowing that the variability of learners' profiles is perhaps the widest, which is the most complex challenge faced by MOOC designers. A heutagogical approach affords the necessary expansive flexibility required to support a student body whose motivations for engagement are largely uncharted. Moreover, Terras and Ramsay (2015) argue that the heutagogical approach 'supports the detailed consideration of individual learners' psychological attributes, skills and preferences and thereby highlights the importance of considering the psychological constructs that explain learner behaviour' (p.483), which is essential to effective MOOC design.

In this chapter, we focus on the implications of applying a heutagogical perspective on a Language MOOC (LMOOC) learning environment and gaining insight into the psychological profile of LMOOC learners from a heutagogical perspective.

Implications of heutagogy for foreign language acquisition and teaching

The literature on foreign language learning and teaching using a heutagogical approach is extremely scarce. We found no studies, neither theoretical nor empirical, that employed heutagogy in a foreign language learning environment. This scarcity can be understood and explained through some interesting facts about the status of the two research fields.

On the one hand, heutagogy has been strongly and recently linked to distance education and online learning, as well as to the online environment and digital technologies. On the other hand, the role and application of information and communication technologies in language learning – the so-called computer assisted language learning (CALL) – is a relatively new area for language learners, teachers and scholars (Tafazoli & Golshan, 2014; Zhou, 2018). However, CALL research has been rapidly evolving. Soon after the rise of MOOCs, a separate subfield of research has emerged, namely Language MOOCs (LMOOCs) (Bárcena & Martín-Monje, 2014), which increases the need and interest to understand better the potential and implications of heutagogy in foreign language learning in online environments.

Heutagogy has potential for foreign language learning, especially in the globalized 21st-century social world where communicating in a foreign language permeates most economic and work contexts. In the current globalized world, where low-cost airline companies make travelling more affordable and the world wide web makes international connections easier, speaking foreign languages is already a prerequisite for success. Acquiring a foreign language is no longer a luxury: it has long become a necessity. Although the need for acquiring foreign languages has increased, the time available for learning has been continuously diminishing. Language learners need to acquire language skills faster and often work through autonomous learning approaches. They unwittingly become responsible for acquiring the language due to social (and often professional) pressure and hence they become very active agents of their learning experiences. Moreover, existing language learning applications, LMOOCs and direct exposure to authentic materials^[1] through the web not only contribute but also induce learners to have more agency in the foreign language acquisition process. The importance of learner agency in language learning has been recognised by sociocultural theorists (Xiao, 2014), that is, learners indeed are actively seeking linguistic competence and non-linguistic outcomes instead of waiting passively to be taught.

Today's language learners' needs point mainly to communication skills, which is also accompanied by today's trend of communicative language teaching (CLT) and by the existing frameworks for language acquisition, for example, the Common European Framework of Reference for Languages (CEFR). The collective aim is to be able to communicate efficiently as soon as possible. Being exposed to and exposing learners to authentic materials and contexts highly contribute to (communicative) language skill acquisition.

Noted language theorists have proposed that there are two separate actions while learning a language: spontaneous and studied (Krashen, 1985; Nation, 2001; Palmer, 1921). According to Palmer (1921), spontaneous language abilities are those that are acquired subconsciously and lead to more natural spoken language. Krashen (1985) claims that the subconsciously acquired language skills are easily used in conversation. Oppositely, studied and learned language skills that are acquired in academic settings where the emphasis usually is on structured grammar and vocabulary are more difficult to access and recall in spontaneous conversations (Pagnotta, 2016). For this reason, spontaneous language use and learning are essential for today's language learners who seek to successfully communicate in every situation. But how does the spontaneity of language learning relate to heutagogy, and how and why can a heutagogical approach to language learning be beneficial?

One of heutagogy's central principles is capability. Capability is one's ability to use the acquired skills and competencies in both new and familiar situations (Hase & Tay, 2004). In an online or technology-mediated language learning context, capability development can only occur in authentic environments. Learners acquire certain language skills mostly in a (semi) formal environment such as an online course or application, which becomes the well-known context of language use for them. To develop capability, learners need to apply the acquired skills in novel situations, which, in this case, emerge mainly in an authentic environment. Using the language outside of the formal learning environment contributes

to spontaneous language learning, which as we have argued above, will then contribute to a more natural spoken language (communication). Learners subconsciously and informally acquire new knowledge in the authentic environment, which potentially leads to a more fluid spontaneous conversation.

Self-determined learning (heutagogy) can boost online language learning, because when adult learners have the opportunity to self-reflect and create their own study plan, the experience has a positive impact on their motivation and performance in the target language (Fengning, 2012; Christophersen, Elstad and Turmo, 2011). Heutagogy gives enough freedom to online learners to plan their own learning trajectories and prepare their own, personal study plans. Double- and triple-loop learning (metacognition) allow the learner to have a deeper insight into their learning needs and to create adequate study plans to achieve their learning objectives.

As we have seen, applying a heutagogical approach can be beneficial in both contexts: MOOCs and foreign language learning. Intending to dig deeper in this topic, we conducted a study in an LMOOC environment. We aimed to map the psychosocial and cognitive profile of learners by applying heutagogical attributes to discover which attributes are the most influential to learners' self-directed learning readiness. We also wanted to understand LMOOC learners' linguistic competencies, their language learning preferences, and gain insight into their capability development. The final output of the research was a framework for designing LMOOCs that considered both learners' psychosocial and cognitive profile as well as their language learning preferences.

LMOOC learners psychosocial and cognitive profile and their language learning preferences: A mixed methods correlational study

We conducted a mixed methods study where five heutagogical attributes – namely *self-directed learning readiness*, *self-efficacy*, *self-reflection and insight*, and five *internet skills* – were measured and the most influential skills were determined through statistical analysis. Qualitative data was collected on learners' preferred language activity types and their capability development (i.e., on their language use outside of the course context). The study was carried out between September 2018 and April 2019 in two separate Italian language MOOCs provided by Wellesley College on the edX platform (www.edx.org). Quantitative and qualitative questionnaires were administered separately. The quantitative survey resulted in 1140 valid answers from a total of 1849 administered questionnaires. For the open-ended questions, we obtained 147 answers to one question and 138 for a second. The detailed description of the research and results are published elsewhere for the interested reader (Agonács et al., 2019, 2020). Here, we present a summary of our main findings.

Our first observation was that, based on measures of a combined skill set, most of the participants fell into the moderate and low self-determined learners' groups. Only a tiny portion (a little more than 4% of the valid sample) was found to be highly self-determined. Moreover, our results confirmed that "*self-efficacy* is the very foundation of human agency" (Xiao, 2014, p. 5) since it was found to be the most influential variable of self-directed learning readiness.

We also understood that *insight* is a strong influencing variable and consistent through the three groups. Self-directedness, indeed, implicates metacognition. When learners are aware of their progress in language learning, they become confident and develop a strong sense of self-efficacy (Xiao, 2014). Both confidence and self-efficacy are the pillars of capability development. For learners to become aware of their own progress, there is a need for metacognition. However, surprisingly, according to our results, the clarity of one's knowledge about him or herself (i.e. insight) is more important than the process of or engagement in self-reflecting. The proactive approach to learning (monitoring, reflecting, acting) is important, and learners do need to reflect on the learning experience continuously. However, if they do not clearly understand the progress they make and which areas are needed strengthening, the reflective process itself does not seem to have a very significant impact on their readiness for self-directed learning.

As for the qualitative string of the study, we understood that learners prefer and engage more in receptive activities than productive or interactive activities. We observed this tendency also in cases when the learner's learning objective was to be able to produce the language. Moreover, for learners, activities directly related to linguistic (grammatical and lexical) competencies have great importance in language acquisition. Therefore, we observed a dissonance – clearly outlined in learners' reflections – between their need for communicative competences (speaking) and their preference for receptive activity types.

Based on our main findings, we outlined some important suggestions that can help MOOC designers and providers in how to help learners go through a learning journey in an LMOOC successfully; how to enhance their skill set and help them become self-determined learners and to prepare them for a more communicative language learning approach.

Framework for LMOOCs based on heutagogical principles and our empirical results

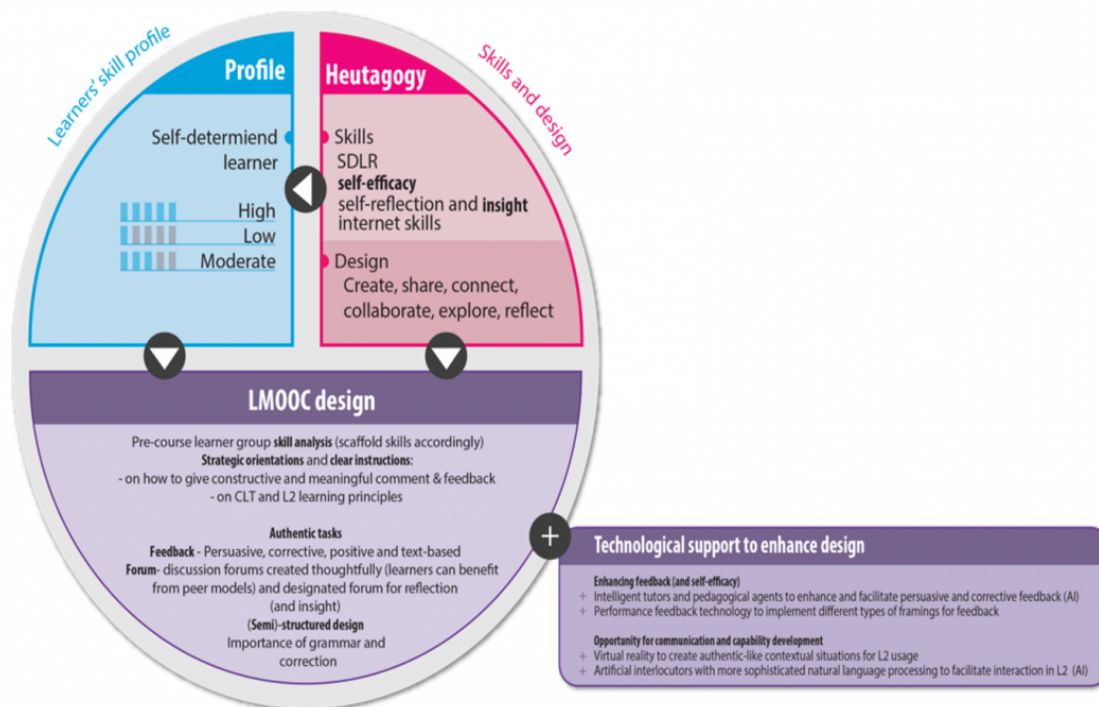
The main findings of our study revealed that most LMOOC learners not only lack self-determined skills but also have a preference for a more structured and more traditional way of learning a foreign language. As outlined above, most of the currently existing (L)MOOCs focus mainly on the delivery of content and are not designed to enhance learners' skill profile. Because MOOCs are heutagogical in their nature, the LMOOC design should be driven by the design elements of heutagogy (create, share, connect, explore, collaborate, reflect) and learners' psychosocial and cognitive profile should also be considered. From the other hand, learners' language learning preference for a more traditional and structured model should not be ignored either, when designing LMOOCs (see Figure 1). Enhancing learners' skills profile will likely contribute to stronger heutagogical (self-determined) learning, which could possibly have a significant impact on retention and engagement in MOOCs. (The conceptual framework and design suggestions are summarized in Figure 1.)

How to enhance self-efficacy

In order to help learners engage more in communicative language activities, clear *orientations* should be given on CLT, and instructors may have to help students understand some empirically proven principles of L2 (as suggested by Brown, 2009). Clear instructions should also be given on how to interact (e.g., types of comments and feedback that are beneficial in the forum activity or peer-to-peer review). The question of strategic orientation of learners should be taken seriously because clear orientation can improve learners' self-efficacy (as hinted by Hodges, 2016).

Figure 1

Conceptual framework and design suggestions



Moreover, for learners, *feedback* does have importance. Feedback options in a massive environment are currently quite limited to simple automatic (frequently yes and no) answers. Corrective feedback is essential not only because learners can gain confidence (which is necessary for capability development), but also because persuasive feedback can enhance positive self-efficacy (Hodges, 2016).

How to enhance insight

It is interesting, though is understandable from a theoretical point of view, that insight (but not engagement in or motivation for self-reflection) is an influencing factor for self-directed and self-determined learning. Insight means that learners have a clear understanding of their thoughts, feelings, and behaviour. Roberts and Stark (2008) have already called attention to the fact that the self-reflection process itself does not necessarily lead to insight. Therefore, even if learners are motivated to reflect, and they do engage in a reflective process, may not gain insight. For that reason, it is crucial to guide and help learners *how to reflect* efficiently. Developing insight of learners in a MOOC can be challenging, though can be viable through providing a designated space where they can share their strategies, difficulties, and successes that encounter during the learning and reflecting process and get persuasive and constructive feedback from a specialised tutor.

How to alleviate the dissonance between learner's preferences for a more traditional approach and their actual needs pointing to communicative language competencies

Learners' learning preferences need to be understood, and design should be developed accordingly. It is important to enhance LMOOC learners' engagement in *productive and interactive activities* (such as forums, speaking or writing activities); however, during design it has to be kept in mind that learners still have a preference for activities that teach the formal structure of the language. For that reason, a coherent and consistent structure is an important design aspect for LMOOCs. Though "language is about communication, and there is nothing more motivating than being able to use one's newly acquired language skills in an authentic environment" (Perifanou, 2014, para. 23). As mentioned above, authentic environments are good for spontaneous language learning and use. For that reason, the opportunity for language use in authentic environments should be provided, and language use should be encouraged to further enhance learners' communicative language skills. Foreign language use in authentic environments is extremely

important not only for enhancing communicative language competencies but also because it contributes to capability development.

What the future holds for online education

The landscape of online education is rapidly changing. In many cultures, the pressure of everyday life has made it clear that the two variables, space and time, have taken priority in learners' decisions regarding training and education.

From the learner's point of view, space and time for training started to be questioned, as learners realised the benefits of their time flexibility when taking courses online and became aware of the fact that online social presence brings new dimensions to the traditional face-to-face training format. The current confinement rules in place in most countries, as a consequence of the COVID-19 pandemic, shows how people are able to adapt and organise their time to run online activities (both in work practices as well as for leisure), escaping the need for displacement and therefore dealing with the frozen variable of space in rather creative forms. People have recently become more interested in online learning. Christof Rindlisbacher (2020) affirms that Google queries for "online classes" increased a whopping 204% from March 7 to March 21 in 2020 according to Google Trends, while queries for "online education" increased 90%. Dhawal Shah (2020) (CEO of Class Central) also called attention to the fact that EdX climbed into the top 1000 websites in the world, thereby joining Coursera.

From the point of view of the trainer/teacher, a learner-centred approach is transformative regarding the aims of training/teaching, as the focus is no longer on transmitting information but rather on promoting learning how to learn. This makes the task of teachers much more difficult as it goes into just "let the learner learn" and the task of designers to offer learning experiences that address the needs of a great variety of learners.

The question is whether this is a temporary effect, which will decrease after the pandemic, or if it is something that will definitively and irreversibly change the educational landscape. It is still early to have an answer to that question, and only statistically calculated previsions could be given right now. But one thing is certain: now more than ever, people need refined self-determined learning skills to upskill and reskill and prepare themselves for the upcoming changes – on personal, professional, economic and political levels – that this pandemic will and has already brought to the world. Only the future will tell us if we – educators, MOOC designers, and researchers – have are up to the task of helping large masses of learners acquire the necessary skills for successful autonomous online learning.

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[1] In foreign language teaching, learning materials are considered authentic if they were not artificially created and for intentional pedagogical use in a language course but are taken out from authentic contexts (e.g.: a piece of a newspaper article or film).



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Chapter 10

Heutagogy and Work

Stewart Hase & Lisa Marie Blaschke

Lifelong Learning

Learner Agency

Digital Technologies

Self-Determination Theory

This chapter examines the role of agency and heutagogy in work-based learning and in preparing learners in tertiary education for work. The world is moving at a fast pace, with change occurring extremely rapidly in a volatile, uncertain, complex, and ambiguous (VUCA) world. Workplaces need people who are able to respond to change and adapt quickly. To do this requires that future employees have the ability to learn as well as exhibit agency. We will look at the role heutagogy can play in enabling agency, helping people be effective learners and also how learning at work can be harnessed, valued and used effectively. Finally, we examine the role of digital technologies in work-based learning.

Learning and work

There are three different ways of thinking about learning and work. First, there is the way in which formal education prepares people for work. Second, there is professional development, which can be formal or informal but which is aimed at the participant's work, rather than personal interest. The third is from the perspective of the learner at work in which the workplace can be seen as a learning laboratory. Every day there are countless opportunities for people to learn. The challenge concerns how the learning is harnessed, what happens to it and how it might be recognised in the same way that formal learning is recognised. In capturing the learning, the learner is able to reflect on the learning, make more sense of it, build on it, and establish a record of competence and capability for future reference.

Today's workplace requires that employees are independent, creative, and innovative, while also able to adapt quickly to complexity and chaos in the organisation. From a heutagogical perspective, organisations need: capable employees able to use their competence in novel, unfamiliar circumstances; people with high levels of self-efficacy; reflective practitioners able to engage in double loop learning; action learners; and employees with the ability to learn. In short, organisations need people who are given and claim agency.

Formal education and preparation for work

In their Learning Compass for 2030, the OECD (2019) describe the importance of learner (student) agency and co-agency with other stakeholders (e.g., peers, teachers, parents, and communities). They also state the core foundations for students to be able to exercise this agency in preparation for the workforce and their role as citizens of the world. These core foundations include skills (social and emotional, learning to learn), knowledge (disciplinary, interdisciplinary, epistemic, procedural), and attitudes and values.

Learning Compass 2030 goes on to describe how transformative competencies build upon these core foundations. These competencies are: creating new value (e.g., knowledge, ideas, and strategies) through innovative thinking and applying knowledge in unique ways in solving problems; recognising the tensions and conflict that exist in an interconnected environment and finding practical solutions through thoughtful exploration and assessment of problems; and being able to take on responsibility through a process of reflection and evaluation of values and goals. The focus of OECD's Learning Compass is not on the content of the curriculum, but rather the learning process.

The need to think beyond the subject curricula is gradually being recognised by higher education institutions. For example, in their research on future skills, Ehlers and Kellermann (2019) identified emerging trends and drivers within higher education that are currently shaping institutional offerings, which include a stronger focus on the future skills required of graduates (e.g., autonomy, self-organisation, and reflection), student design of their own personalised curriculum, and an emphasis on providing lifelong learning offerings.

Given the need for increasing agency in general and learning agency in particular, there is an opportunity for heutagogic principles and techniques to be applied within higher education in preparing students for the workforce (See Chapter 2).

Professional development

Heutagogy and agency have been applied in a variety of workplace contexts (Barton, 2012; Hexom & Marlaire, 2013; O'Brien et al., in press; Ridden, 2014). In a review of vocational education and training programs in Australia, Willmott and Barry (2002) found that the VET sector is applying self-determined learning in a number of ways:

- increased learner responsibility for learning
- increased choice in learning activities
- workplace problem-based learning activities
- group work
- adult learning behaviours
- reciprocal feedback between teacher and learner.

Tay and Hase (2004, 2013) were involved in a professional development program for executives in Singapore that also led to obtaining an action research doctoral research degree. These executives were mostly engineers who were well-versed in using quantitative techniques in their practice but not qualitative approaches that were used in change programs in their workplaces using action research. Tay and Hase watched the PAH continuum (see Chapter 2) in action as the learners went from being very supervisor dependent to heutagogical learners in the course of the program. Learner agency rose and dependency diminished as the participants progressed.

Hase (2014) also provides a detailed approach on how to design professional development workshops using heutagogical principles. The workshops are based entirely on the identified problems, issues, concerns, and interests of the participants rather than the interests of the facilitator. Thus, context is king in this process as it is used as the basis for the learning. The role of the 'learning leader' Hase (2014) is to make sure that essential content, techniques and skills find their way into the process without using didactic methods. Learning leaders need to have mastery of their subject and the ability to spontaneously design learning activities that encourage learner agency.

In a study involving professional development with ontology nurses, Cordon (2015) found that using heutagogical approaches raised the confidence of participants in managing their own learning and increased their ability to solve unfamiliar problems. Studying informal learning among HR practitioners, Bailey (2013) found that heutagogic approaches enhanced the capacity for learners to become more independent learners. From a teacher's perspective Jaakola (2015) suggested that they could, in the context of using networked technologies, more easily become facilitators of self-determined learning.

Learning at work

We've already discussed in previous chapters how, when people want to learn a new skill or find something out, they choose how to achieve their goal, without the need for a 'teacher' or a formal course. Learners may choose to do this at some stage, but it is on their own terms. Lombardo and Eichinger (1996) found 70% of workplace learning occurs through experience, with 20% of learning is learned from others and 10% from formal training. Research from Johnson, Blackman and Buick (2018) has further indicated that in order for learning to be repeatable, structures must be established that support learners in codifying and internalising learning.

In short, people design their own learning journeys when motivated to do so – and when given an environment that supports this agency. Learner ability to design their learning has been further aided and abetted by the advent of the Internet and by e-learning and digital technologies that have been a popular area for use of heutagogy methods (these are described below in more detail). Due to the availability of these technologies and the demand for continuous learning, innovation, and creativity, the workplace provides a perfect opportunity to enhance learner agency and in harnessing informal learning. Some examples from the literature include situated learning (Lave and Wenger (1991), work-based learning (Boud & Solomon, 2001), reflective practice (Billett, 2001; Boud & Walker (1998), and informal learning at work (Eraut, 2011).

Having the self-efficacy to take control of personal learning is an important skill in career development (McIlveen, 2010), particularly in contexts in which people cannot rely on teacher-centred approaches to their learning and need to rely more on their own resources. McIlveen called this 'transformative career development learning.'

It is important to remember that the 'teacher' is not redundant or that informal learning has to be a completely random process. Certainly, someone needs to determine essential content and skills to be learned, with the teacher serving as a mentor or coach to assist in self-scaffolding, as suggested in Vygotsky's notion of 'zones of proximal development' (Fani & Ghaemi). While content is important, self-determined learning is more concerned with process, that is, how the learner learns and how the learning is harnessed.

Some practical ways of using heutagogy and harnessing learning could take the form of keeping a learning portfolio or a reflective learning journal or diary, participating in action learning groups that meet on a regular basis, taking part in regular coaching and developing a coaching plan, creating and building communities of practice for learning, sharing information, and networking, and attending weekly learning meetings.

Using digital media to transition from formal to informal learning

Using the PAH continuum (see Chapter 2) can assist in helping learners transition from formal to informal learning from passive, traditional pedagogic learning to active, self-determined, heutagogy learning (Blaschke, 2014a). This movement along the continuum can be achieved by promoting learner agency and incorporating heutagogy design elements, specifically through the use of digital media that support heutagogy learning (Blaschke, 2014b). Scaffolding the learning process can also help learners adopt a heutagogy approach to learning, especially if they are accustomed to traditional classroom instruction.

One approach to helping learners transition to heutagogy is through the implementation of a personal learning environment (PLE), where the students identify and expand their sources and network of learning and knowledge both inside and outside of the classroom. Digital media can be useful in establishing a PLE, which learners use to find, create, and share information, as well as to connect with others in the network (Hayworth, 2016; Hicks & Sinkinson, 2015). For example, Twitter, blogs, Google Docs, e-portfolios, and learning journals give students an opportunity to create, share, and reflect on own knowledge and experience. Online communities of practice allow students to connect and collaborate with likeminded scholars, researchers, and practitioners in the field. Within the workforce, these communities of practice can be created using a company intranet or social media networking tools such as Slack

(www.slack.com). Wark (2018) found that learners using emergent technologies are able to use self-determined learning to better understand and use the technologies in practice, which was then shown to encourage learners to be more responsible for their own learning and, at the same time, give them satisfaction when use of the technology is relevant to their context.

The literature has explored numerous means of using digital media to nurture and promote self-determined learning (Table 1).

Table 1

Digital media that support transitioning from formal to informal learning (Hase and Blaschke 2021).

Digital Media	Examples from the Literature
Twitter, blogs, and GoogleDocs	Blaschke (2014b); Chawinga (2017); Junco, Heiberger and Loken (2010)
Mobile devices and online communities of practice	Cochrane et al. (2014); Cochran and Bateman (2010); Cochrane and Narayan (2013, 2014); Gerstein (2014); Narayan and Herrington (2014); Narayan, et al (2017); Narayan, Herrington and Cochrane (2019); Price (2014)
Personal learning environments	Hayworth (2016); Hicks and Sinkinson (2015)
Online portfolios and learning journals	Blaschke (2014a); Blaschke and Brindley (2011); Blaschke and Marin (2020, in press)
Electronic games and augmented reality	Halupa (2017); Hornsby and Maki (2008)
Massive open online courses (MOOCs)	Agonács and Matos (2017); Anders (2015); Armellini and Padilla Rodriguez (2017); Beaven, Hauck, Comas-Quinn, Lewis, and de los Arcos (2014); Bozkurt and Keefer (2018); Crosslin (2018)

Conclusion

An exponential rate of change, and the need to learn quickly and 'just in time' requires a different approach to both informal and informal education. In order to realise this approach, we must make the learner the centre of the learning process and the main agent in his or her own learning, rather than a passive recipient. Internet and digital technologies provide significant learning affordances that promote self-determined learning, thus offering considerable potential for supporting work-based learning and in preparing learners for the workplace. At the same time, the workplace is a petri dish of informal learning opportunities. The question is how to find ways to harness this learning and to take advantage of these learning affordances.

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Chapter 11

Promoting Agentic Engagement and Heutagogy in Tomer Elementary School in Beer Sheva, Israel

Haya Kaplan, Ilanit Bar-Tov, Amnon Glassner, & Shlomo Back

Heutagogy

Agentic Engagement

Self-Determination Theory

Elementary Education

This chapter introduces a school-wide intervention program in Tomer Elementary School in Beer Sheva, Israel. The program emphasizes agentic engagement and self-determination among students and teachers by supporting their psychological needs (Ryan & Deci, 2017) and implementing heutagogy. The teachers developed a wide range of methods for these aims, which are described in detail. The program was followed by a qualitative study in which students and teachers were interviewed. The results indicate meaningful conceptual and behavioral changes that occurred following the teachers' and students' psychological need support. While teachers emphasized the pedagogical contribution of the intervention, students highlighted the social aspect, focusing on the need for belongingness to their peers and teachers. The students' responses indicated a proactive approach to learning and to social life. They exhibited triple-loop reflections by reporting what they had learned of themselves as students and human beings. They also expressed a sense of autonomy and a sense of competence. The process was spiral and continuous, ranging over the entire school community. It was a gradual change along a consistent process encompassing both teachers and students. The results have implications for the implementation of Self-Determination Theory and heutagogy in the educational system.

Introduction

One additional aspect of engagement is Reeve's concept of *Agentic Engagement* (Reeve & Tseng, 2011; Reeve, 2013; Reeve & Shin, 2020). Agentic Engagement refers to students' active involvement in their learning process, as they create their own need-supportive environment, set their own goals and strive to achieve them. It refers to "students' constructive contribution into the flow of instruction they receive" (Reeve & Tseng, 2011, p. 258). Students who are agenticallly engaged are proactive; they communicate their preferences, ask questions, let their teachers know what they like, need, or want, and receive a response from their teachers. It is an, "ongoing series of dialectical transactions between student and teacher" (Reeve, 2013, p. 580).

Teachers' autonomy-support and the experience of need-satisfaction were found to be predictors of agentic engagement and other aspects of student engagement (Jang, Kim & Reeve, 2016; Matos, Reeve, Herrera & Claux, 2018; Reeve & Tseng, 2011). Agentic engagement predicted changes in perceived teacher autonomy-support, student need-satisfaction and self-efficacy throughout the year, and also predicted students' academic achievements (Matos et al.,

2018; Reeve, 2013; Reeve & Lee, 2014; Reeve & Tseng, 2011). Agentic engagement can also be achieved by employing heutagogy as a learning-teaching approach (Glassner & Back, 2020).

Heutagogy (self-determined learning)

Following Hase and Kenyon (2013) and Blaschke et al. (2014), Glassner and Back (2020) applied heutagogy in college and university courses. Heutagogy is a student-centered learning approach in which the students, facilitated by a lecturer, determine their own learning. They decide what to study within the general topic of a course, as well as how to study and with whom. The process is followed by triple-loop reflections written by the students. Usually, they also choose how to evaluate the process and the outcomes of their learning and how to demonstrate and share the knowledge they have created. Analysis of students' reflections in Glassner and Back (2020) showed that the heutagogical learning satisfied the students' psychological needs for autonomy and competence. The authors found that "the most salient findings have been that heutagogy is student self-determined but teacher dependent. It presupposes a flexible teacher who is ready and able to trust the students and to maintain with them a genuine dialogue concerning their wandering." (p.181).

In the next section we present Tomer School and introduce its process of change and the accompanying research.

Tomer School

Tomer Elementary School was established in 1972. The school consists of about 300 students in ten regular classes, organized by age, and three special-need (special education) classes, 55% boys and 45% girls. The student population comes from low socio-economic backgrounds, with about 13% of the students from immigrant families, in which Hebrew is not spoken. The faculty includes 27 teachers, about half of whom hold a M.Ed. degree. The parents are involved in decision-making in various domains within the school, such as in choosing after-school enrichment courses.

In 2013, Tomer School joined a network of schools in Beer Sheva, Israel that are based on Self-Determination Theory (SDT; Ryan & Deci, 2017). This network is led by the Center for Motivation and Self-Determination at Kaye Academic College of Education. The network's goal is to promote self-determination and autonomous motivation in learning and teaching and to help schools develop into need-supportive environments (Bar-Tov & Kaplan, 2019). In 2015, the School joined the R&D, Initiatives and Experiments Division at the Israeli Ministry of Education.

In 2015, Tomer School launched an educational program aimed at promoting agentic engagement, an idea that is based on SDT and Reeve's ideas (Reeve, 2013) and the heutagogy learning-teaching approach (Hase & Kenyon, 2013; Blaschke, Kenyon, & Hase, 2014; Glassner & Back, 2020).

In 2018, the school introduced a unique induction model, aiming to create a need supportive school culture that supports beginning teachers during their initial years in the education system. The model, which is still in place, includes mechanisms for teacher induction such as matching new teachers with mentor teachers, assigning an induction coordinator, conducting workshop sessions for beginning teachers, encouraging initiatives by beginning teachers, and more.

The school was granted an Award of Excellence from the Ministry of Education for their unique model. In 2019, Tomer School was certified as an institution that promotes environmental education and sustainability for the community through multi-disciplinary and heutagogical-inspired learning.

Tomer School's vision focuses on advancing a need-supportive environment for both teachers and students, developing agentially engaged and autonomously motivated students and teachers, providing students with opportunities to successfully develop their motivational inner resources so that they are able to lead their own social life and achieve their goals. The school emphasizes partnerships among students and teachers, aimed at creating new knowledge.'

The implementation of these ideas in Tomer was accompanied by academic research. Some of its findings are presented in this chapter. The school's unique model has been presented in education and academic conferences (Bar-Tov & Kaplan, 2019; Bar-Tov & Kaplan, 2020).

Bridging between theory and practice

The change process and the accompanying research

The starting point of the change process at Tomer School was the staff's dissatisfaction with the children's motivational difficulties. Children had exhibited indifference, disinterest and minimized investment in their learning, being barely involved in decisions on learning or their social life in the school. Teachers had felt they had to lead and manage the students' learning and behavior (so that the teacher was at the center while the students were passive, leading to a controlling teaching style). However, the students' progress did not correlate with the teachers' investment.

Throughout the years, since 2015, the school continuously examined students' and teachers' needs and composed a school vision to answer these needs. To address the dissatisfaction with students' motivation issues, a special team was put together to lead the process, referred to as the 'leading team', which included the principal, vice principal, school counselor, grade representatives and other position holders in the school. The leading team worked collaboratively with the principal and the faculty. Staff-wide plenaries discussed ideas and decisions made by the leading team while also bringing up issues, ideas and needs of teachers, which were then discussed by the leading team. The theory-to-practice approach of the intervention program guided the discussions of both the leading team and the plenary meetings.

The school concentrated on processes that promoted active involvement and autonomous motivation of the learners. The processes were monitored by academic advisors from Kaye Academic College of Education and the R&D, Initiatives and Experiments Division of the Ministry of Education. During the years 2015-2020, the community of teachers convened every two weeks (for a total of 30 yearly hours), often in small groups, for professional development sessions in which the teachers were active participants. The topics covered in these sessions included SDT principles and ways to create a need-supportive school environment; Agentic Engagement and heutagogy theory and implementation; the principles of sustainability and their assimilation within the heutagogical process; and assimilating digital learning tools to support self-determined learning. The school also underwent physical transformation: vegetable gardens were planted in the school yard for students to nurture; study corners were added in the hallways outside the classrooms; and several classrooms were digitalized.

The faculty's theoretical learning gradually shifted into developing actual practices that are unique to the school, some of which are presented in this chapter. These teaching tools underwent constant adjustment and improvement until their final assimilation among the students and teachers.

Examples of tools developed within the school

By adopting their unique pedagogical approach, teachers at Tomer School developed a wide range of methods to promote self-determined, agentic, and autonomously motivated students. Some of these tools are presented below.

Method 1: Circles of Belonging – A heutagogical practice that supports students' psychological needs. Circles of Belonging is a spiral program taught throughout the school grades. Its central goal was to enhance the sense of belonging of students to their various social circles: the family, the class, the school, the neighborhood, the city and the state. The program started with the teacher introducing the central theme to the class. Then, applying heutagogical principles (e.g. exploring, creating, collaborating, connecting, sharing and reflecting; see Blaschke & Hase, 2016), the students chose their own specific topic and decided how they would study it and with whom (in teams, pairs, etc.). During the time allocated for the program, the students gathered at designated times to reflect, present their learning process, indicate its challenges, ask questions, share their experiences with the class, and receive feedback. The students then took part in their own evaluation by writing up a learning assessment scale together with their teachers.

When the learning culminated, each group presented its final self-learning product to the students and parents, and the final products were then also presented in a school exhibition.

The topics chosen by the students included the following: for the theme *My Neighbourhood, My City* students studied special sites within their neighborhood and city; for the theme *Israel Celebrates 70 Years of Independence*, students decided to study Israeli inventions, and the learned knowledge was presented by models and posters shown in an exhibition.

In accordance with the principles of SDT, i.e. specific ways to support students' psychological needs (see Kaplan & Assor, 2012 and Reeve, 2006), this heutagogical learning process supported the students' needs. Their need for autonomy was supported through the focus on personal fields of interest, allowing choice, and creating a real change relevant to the children's lives. Their need for competence was supported when teachers assisted them in setting optimal goals and dividing the learning process into steps for intermediate presentations, questions, and feedback. Students' need for relatedness was supported when students worked in teams of shared interests, received opportunities for self-expression within the team, and took on roles while working collaboratively. The students directed their own learning with the support of the teachers.

Methods 2-3: The Matana Diary. An important product created in the school is termed the *Matana* diary. *Matana* means 'gift' in Hebrew, and the *Matana* diary is a journey that promotes self-awareness, self-determination and agentic engagement (Bar-Tov, 2018). The diary has versions for younger and older students as well as for special needs students (The language and content were adjusted for the specific age group and population). The diary contains a variety of tools: dialogic tools, a SWOT chart (**S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats), self-inquiry (which is a personal learning map), a personal plan, an agency scale and a model of the agentic engagement of the student. Below are some of the components included in the diary that helped promote students' agentic engagement as reflected in a self-diagnostic process (their proactivity and ability to set goals, and more).

Method 2: Actual Agentic Engagement – I lead my own change

Stage one: Knowing myself better, SWOT mapping and setting a goal. The school implemented a unique version of the SWOT tool for students' self-diagnosis. This tool allowed the students to get to know their own strengths and opportunities, which may promote their success, as well as their weaknesses and external threats, which may hinder progress and should be handled in an agentic way. The self-diagnosis of each child was done together with the homeroom teacher. A variety of tools for teacher-student exchange developed by the school – such as empathic and need-supportive dialogue, which enables satisfaction of students' needs (e.g., to feel close to the teacher, to talk about authentic experiences and feelings, to receive specific feedback; see Kaplan & Assor, 2012) and competence-supporting dialogue (Assor, 2016) – assisted in this process. The statements included in the SWOT chart also helped the teacher when convening with the student (Table 1).

Table 1

Example of SWOT mapping and setting goals

Weaknesses Areas in which I have to improve	Strengths Areas in which I have good abilities and can provide a springboard for my success
I feel that I am weak in...	I feel that I'm good at... I have strengths in...
I feel that it is difficult for me to...	I succeed in...
I don't succeed in...	I like... I like learning...
I am not good at...	In the class, I feel...

Weaknesses	Strengths
Areas in which I have to improve	Areas in which I have good abilities and can provide a springboard for my success
It is difficult for me to...	My best friend is...
A subject that is hard for me is...	A subject that is easy for me is ...
I want to improve in...	I'm good at learning...
A subject in which I don't succeed so much is ...	I feel it is easy for me to learn...
When I get to class in the morning, I am not happy with...	When I get to school/class in the morning I am glad that... to...
It bothers me that...	It makes me happy when...
With friends I feel...	With my friends, I feel...
	I feel that my behavior...

Threats	Opportunities
Obstacles and disturbances that may negatively affect my development	Positive opportunities that may enable my success
I am afraid of ...	I get academic assistance from...
I am afraid that I will not succeed in...	I participate in the ... committee. I am active in...
At home, I cannot...	I take active part in...
It is difficult for me that my parents...	My task at home is...
It is difficult for me that my friend...	My responsibility in class is...
In class, it bothers me that...	I was chosen to...
I would like the teacher to...	I integrate in...
I would like that...	I would like to speak with the teacher about... (afternoon classes, volunteer activity, duties, friends, fields of responsibility, family, teachers...)
I would like to speak with the teacher about...	Things that the teacher does that make me feel good...
(family, friends, teachers, learning)	Things in my class that make me learn willingly ...
Things the teacher does in class that bother me...	When something is difficult I ask ... for help.
Reasons why I don't want to learn in my class...	I help...

Stage two: Setting self-improvement goals and a work plan. Following the self-diagnosis, each student decided on one or more self-improvement goals in either the academic, behavioral, social, or the emotional areas. This stage was accompanied by a teacher, who helped the students to identify their strengths and utilize them to achieve their goal. Each student brainstormed what they could do to achieve their goal and who or what might help them, and then devised a plan that included operative, achievable objectives and a timetable. For example, a student whose learning capabilities were impeded by emotional regulation difficulties set a goal to improve her behavioral self-control. She decided on steps towards her goal, such as to take on a social role at the school. As a result of these steps, her behavior and consequently her academic performance improved.

Stage three: Formative feedback and periodic meetings with the teacher. During the timeframe set by the students for achieving their goals, they met with their teacher routinely in order to create a need-supporting dialogue. The teacher might, for example, give the child constructive feedback, convey messages about recruiting personal efforts and capacities, remind the student of his or her strengths, and brainstorm with them ways to overcome difficulties.

Stage four: Summative feedback and presentation of the products. At the end of the period set by the student for self-improvement, the students assessed their own success in achieving the goal (on a scale of *not at all*, *to some extent*, *to a large extent*). They also wrote a reflection, with the help of their teacher, to produce insights and set further goals. The students recorded this process in their Matana diary. Students could choose whether to present their products to the parents in a teacher-parent-child conference.

Method 4: My Agency Probe. This method is based on the definition of Agentic Engagement as the students' constructive contribution to the flow of the teaching process (Reeve & Tseng, 2011). The Agency Probe allowed students to choose a learning activity from their classroom and examine it from their own point of view in various aspects, such as their level of interest and involvement, their level of self-expression and how much the activity was meaningful to them. This provided the teacher with valuable feedback and encouraged him or her to adjust the lesson so that it could better answer students' needs. For their part, students examined what *they* could do to improve their involvement and satisfy their own needs. This tool is presented below.

Table 2

Example of Agency Probe

The lesson/activity that I choose:

To a great extent	Very much	Some	A little	Not at all	
					To what extent was the activity interesting?
					To what extent did I feel involved?
					To what extent did I feel I could express myself?
					To what extent did I feel it was important to me?
What do I choose to improve and how? What do I want my teacher to know?					

Findings: The perspectives of teachers and students

Teachers' voices

In this case study, nine teachers and three members of the leading team were interviewed in semi-structured interviews that examined their views about the program goals, teachers' and students' agentic engagement and motivation, their personal experiences and the practices they used. The findings point to meaningful processes within the school (Bar-Tov and Kaplan, 2020; Bar-Tov & Kaplan, 2019; Kaplan & Madjar, 2019) and indicate that the difficulties experienced by teachers prior to the program have been addressed.

All teachers reported a slow and multifaceted change extending over several years that required, and still requires, an investment of time and effort to change their conceptions, to adapt new practices and to deal with uncertainty and difficulties. Examples of such difficulties include feeling unprepared before a lesson that was supposed to be led by students, or feeling uncertain when a student runs a lesson, which might develop in unexpected directions. They reported changes in their own beliefs and teaching methods. Traditional learning has shifted towards learning based on active involvement, choice, and students' self-determination and agency. There has been a change from teacher-centered to student-centered learning. Teachers gradually learned to allow the students more independence and to let go of their need to control (the students, the lesson).

All the teachers expressed intrinsic goals and beliefs concerning the students, which reflected the changes they had undergone. They would like to see a student who is curious, proactive and involved in his academic and social life: a student who sets goals and strives to achieve them, *'an active, agentic student who takes his destiny into his own hands and leads his own life'* (interviewee 8).

While initially, teachers thought that meaningful learning would only occur if they transfer the knowledge themselves, believing that only an authoritative teaching style might bring about a change, they now realize that the key is in granting autonomy to the students and letting them lead their own learning.

Furthermore, the school has formulated a uniform language of professional terms while developing and implementing practical tools to put its educational approach into practice. The following statements demonstrate the transformation experienced by the teachers as they developed an orientation towards and practices of student-centered teaching:

'Amazing. They have independence, they have autonomy and they have their ambitions and their goals. It's wonderful. It's great to see that... It wasn't easy, knowing how much to let go and granting them independence.' (interviewee 1).

'Within a few years I learned to let go. What do I mean by 'let go'? Knowing that the child, the student, has capabilities that haven't been given an opportunity to shine because we, the teachers, have held – what's the expression? – held the cards close to our chests, and didn't trust our students.' (interviewee 6).

These changes occurred in an environment that supported the psychological needs of the teachers, too. The need for student autonomy, for example, was supported when the program (and the principal) enabled teachers to realize their capacities, express their ideas, and share difficulties in a supportive atmosphere. We can also see support in teachers' competence. Teachers' initiatives were encouraged and it became legitimate to bring up difficulties and dilemmas without feeling threatened or judged.

Students' voices

The school counsellor interviewed 13 children in grades 4th to 6th through semi-structured interviews that focused on their learning experiences, motivation, views on the school's learning-teaching methods and their social life (Kaplan & Madjar, 2019).

Students spoke about the opportunity to experience new things, express their own interests, fulfill their dreams, discover their own abilities and work both independently and collaboratively with classmates. These experiences resulted in the creation of new knowledge, bringing about creativity and curiosity-led involvement (autonomous motivation):

'They let me open up my mind, be creative, try new things, things I would like to see exist... these are new things, different and special things.' (interviewee 8).

'I thought what I would do if I wanted to change anything about today's technology, improve something in the world. I had an idea and we managed to do... ah... many things, we also had a kind of invention fair for Israeli inventions, and each one exactly according to his dream or his opinion and what he knows, he succeeded... I saw in myself things I didn't even know I could do.' (interviewee 5).

Responses indicated a proactive approach to learning and to social life. The students described opportunities where they were provided to express their needs and preferences and to lead their own learning and social life. For example:

Interviewer: what makes you satisfied?

Interviewee: that we can express ourselves.

Interviewer: how?

Interviewee: that we can invent something we want, not that they (the teachers) want, that we want.

Interviewer: and how does that affect your drive to learn?

Interviewee: better, because they let us express ourselves. (Interviewee 14)

Students exhibited triple-loop reflection when they reported what they had learned about themselves as students and human beings:

I learned about myself that when I set goals for myself I achieve them... I have nothing to fear... (Interviewee 9).

I learned that I know what I want and I stand up for my views... (Interviewee 9).

I do things my own way and nobody else's way... (Interviewee 14).

While teachers' interviews emphasized pedagogical aspects, students highlighted the social aspect, focusing on the need for belongingness to their peers and on various ways of achieving this goal (e.g. group learning, setting social goals):

'I am a girl who likes to help and support friends, as much as I can... to help friends and contribute to the school, and I can do that in the school.' (Interviewee 10).

Children expressed a sense of autonomy, choice and motivation. Their reports indicate a variety of ways that teachers supported their autonomy.

'The teacher lets us be very free, think about all kinds of things we would like to do... a sense of 'you do what you want and if you make mistakes it's okay, mistakes happen'... to feel that what we do is in our hands and in no one else's hands and that kind of thing... (Interviewee 11).

'You learn about the thing you feel most connected to in the world, the thing you love the most, how could you not want to study it? (Interviewee 14).

The *Matana* diary promoted students' awareness of their feelings, opinions, and preferences. It enhanced their sense of competence and trust in their abilities, allowing them to discover inner strengths and solve social problems.

Interviewer: How important is it to you, how helpful is it to choose your goal in your diary?

It helps me understand what I need help with, what I like, what I'm strong at academically, what I enjoy doing, and then I plan how to achieve my goal (interviewee 11).

Children also expressed feelings of belongingness to the school, to their peers and to their teachers. Working in groups also enhanced social relationships. The students consulted with their teachers, and these dialogues made them feel that there was a caring and dependable figure that could help them cope with difficulties.

'Being a student at Tomer is really fun because they always listen to you, always give you an opportunity to express your feelings and do things that will benefit you and other students... a child who comes to school has a great opportunity to succeed and meet new friends.' (interviewee 5).

Conclusion

The process of change at Tomer Elementary School was spiral and continuous, and ranged over the entire school community. It was a gradual change through a continued, consistent process in an environment that supported the needs of both teachers and students. This endeavor is not without hurdles but it allows teachers to meet the challenges, continue to construct their pedagogical worldview and build the appropriate methods to fulfill their dreams regarding learning and teaching.

We can conclude that schools should strive to be need-supportive environments that enable agentic realization of students' capabilities and interests. Teachers should understand SDT principles and heutagogy practice by experiencing them. It is most important to trust the teachers' capabilities to learn as a model that encourages them to trust their pupils' abilities. This can be done by supporting the teachers' psychological needs. The trust given to them modeled a parallel process with the students.

The teachers attested that they had shifted from teacher-centered education to a student-centered approach.

The qualitative study (Kaplan & Madjar, 2019) exposes the connection between theory and practice. In order to develop autonomous motivation and to be agentic, students need to trust their teachers and classmates and to feel trusted by them (i.e., they need to feel a sense of relatedness). They also need to feel capable of being self-determined and active learners and self-aware about who they are as learners, what they want and what their needs are (a sense of competence and autonomy),

Heutagogy practice allows learners to lead themselves in an agentic way. Yet we have learned that it is important to scaffold the process. Both teachers and students need assistance as they adjust to the new approach. This understanding is behind the development of specific tools at the school, which provided scaffolding for teachers so that they could practice and apply ways to support their students' psychological needs and encourage heutagogical teaching and learning.

The role of the school principal in this untraditional process is to be a role model supporting teachers' autonomy and encouraging teachers' and students' initiatives as part of a school culture. We conclude this report with the principal's testimony as given in the interview:

We are excited to see the shine in the students' eyes and their joy of learning. The children are very active and their voices are heard much beyond the lessons. The children lead projects of their own initiatives when they identify a need; they write to me as their principal quite a lot of letters ..., they convene with me and conduct open dialogue and start acting. We want our children, the citizens of tomorrow, to be active participants and to act for themselves and their communities, and these children are actually out there doing it.

As this manuscript is being written, Tomer School is conducting remote learning due to the COVID19 pandemic. The learning methods at this unusual time include a heutagogical learning setup in which the students manage their own school day at least once every week. They choose their own study topics and decide how to represent the new knowledge and how to assess the process and its products.

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Chapter 12

Learner Agency and Architectures of Participation

Nigel Ecclesfield, Vijaya Bhanu Kote, & Philip Ecclesfield

Participation

architectures of participation

early years education

Many writers have described and explored heutagogy in terms of discrete problematics such as the adoption of Web 2.0 technologies in lifelong learning, distance education (e.g. Blaschke, 2012) or from within higher education frameworks (Cochrane, 2020). This chapter explores the work of two teachers and their early years' learners who engage in the practices of heutagogy or self-determined learning, as described by Hase and Kenyon (2013) and explored in Blaschke, Kenyon and Hase (2014). The accounts of these two teachers demonstrate that self-determined learning should not be assumed to be the province of higher education (Ecclesfield & Garnett, 2020), nor can it be absorbed in practices such as instructional technologies. Rather, Vijaya Bhanu Kote and Philip Ecclesfield work in primary and early years settings with a focus on learning and learner agency. A short afterword looks at the issues surrounding their work and heutagogy in practice across all forms of educational provision.

Introduction

This chapter will present two accounts of work based in heutagogical principles from primary education in India and pre-school education in England as a way of illustrating self-determined learning from early stages of life, not as something to be activated later in life. These self-described accounts demonstrate ways in which teachers/practitioners can co-create architectures of participation that enable learner agency and encourage learners to contribute to the learning of their peers and teachers, promoting confidence and collaboration (Ecclesfield & Garnett, 2020).

Vijaya

I started teaching in 1998 in a Government School in a very remote village in Visakhapatnam District. Seeing the building, which was in a condition of dilapidation, seeing the needs of the villagers and the lack of awareness about education in village elders as well as in youngsters and children, I realised that it would be inappropriate to reveal my digital and wider educational aspirations at that time. I would just cook my dreams when I hit my bed and hope they would come true one day.

The early steps I was able to take resulted in improving the achievements and engagement of the learners and I could then start to instigate an awareness of learning in the village through a few limited activities. I organized meetings with parents and trained them how to help their kids learn on their own at home. I framed learning activities and asked students to deal with them individually and come up with their results. I started giving encouragement and improvement

gifts every month. These steps brought about improved engagement in the children, as well as helping to initiate family, home-based activities. Parents and the community started reaching out to me for suggestions regarding their children's education, as well as their own social and family concerns and their own learning needs.

I kept reading about how educational technology was developing around the world, and this reinforced my intention to use digital technologies with my learners and the wider community. In 2008, I finally purchased a desktop computer by saving money every month for two years from the meagre salary I received at that time. Working with the computer meant that the first of my dreams had come true and all my pre-cooked dreams of ten years returned with a vengeance. Our school did not have electricity connected in 2009, and I begged our Head Teacher to apply for it, as I was learning to use the computer at home and could see how an electricity supply would be essential to my projects.

We did manage to set up wired Internet connection from India's national ISP service, (BSNL) at our house, which was very close to the school building. I then started to make use of the Internet connection to search for related lesson ideas and materials for the syllabus at our primary school. It was a time of blind passion to learn for myself and to implement what I learned in my school and with local community. Maybe I was just like the kids "discovered" by Sri Sugata Mitra in his "Hole in the Wall" studies?

I managed to persuade my Head Teacher to let me work with children at home every Saturday. Not that he needed much persuasion as he was fully committed to the development of pupils, as it was a very remote and under-developed area we worked in and he accepted my rationale for this "extra-curricular work".

In the next stage, I promised to save money again and purchased a laptop, which I could carry to school to teach students. Thus, I would work at night after everyone slept at home, using my desktop to learn things, download videos and images from internet, save them on CD's, prepare documents, and try preparing presentations and so on. Each Saturday, I would bring my class kids home, get them to sit in front of the 19-inch screen, set up speakers, and play the lessons, and I kept welling up like a fountain whenever they clapped with joy at enjoying the new method of learning with digital technologies. This was the time I started to be aware of the idea of heutagogy, the third "gogy" of learning and teaching philosophy and practice.

A year passed, it was now 2010 and promises were kept. Our Head Teacher succeeded in getting electricity connected for the school, and I succeeded in buying a laptop. This was the revolution in a Harijanawada school, which was considered to be the most backward in our small town. Parents were now enthusiastic to know about what was happening at school.

Watching my posts on Facebook, my soulmate Madhuri Jonnalagadda offered to purchase a digital projector for the classroom. This was in 2013, and the first ever-digital classroom in a Government Primary school in Andhra Pradesh had started. It developed further when one of my friends, Madhav Reddy donated his desktop to the school. Students learned how to use the computer and by the end of the academic year, they word-processed their own notes and prepared presentations for their lessons. The use of a digital classroom enhanced the developments of learners, which included reductions in pupil absences, increased enthusiasm in class and affection for school in children and their parents. At the same time, my colleagues were engaged with their pupils in learning about heutagogy and applying their learning across the curriculum. This influenced my later decision to provide training in heutagogy only to teachers, with their pupils serving as learners to help teachers to adopt heutagogy.

The operation of the Digital classroom supplemented my experiments in heutagogical learning and started producing marvellous results. In 2015, the class V batch students (aged 10 years) achieved best results in our state assessment and the book written by 13 students named "Letha Akasalu (Tender Skies)" was released in 2015 in the Book Festival in Visakhapatnam. This book was written by the students to show how they have learned through heutagogy and the digital classroom.

I studied heutagogy more and tried to localize it and framed a method that would suit the environment I was working in. This gave good results. The same was suggested to me by Fred Garnett when I was authoring a module on heutagogy,

where I have emphasized localizing heutagogic methods and implementing them according to the circumstances of the environment the teacher works in.

I was transferred to another school in November 2015, and I saw the same situation again at a school whose circumstances were worse than that described above. We began working to change the scenario again, starting from scratch. The school had no electricity connection and no support infrastructure, and this school was in a very bad position in relation to all measures of learner engagement and achievement. Working together as staff, with well-wishers, friends, parents and the community, we renovated the school, had electricity connected, established two digital classrooms, worked hard to improve the infrastructure, and make the transformations needed to support learning. It was truly a community Architecture of Participation! (See Ecclesfield and Garnett, 2020).

My experiments were all the time encouraged and supported by my mentor Sri. Devineni Madhusudhana Rao. He is an educationist who supports poor students and schools with his funding, donating lot of books for educational purposes and keeps supporting teachers who work for the betterment of the students. He has supported me by providing resources, encouraging me to talk about heutagogy in the wider community and working with learners, while enabling me to work in schools where I trained both pupils and teachers together in heutagogy. It is a principle of my work that teachers are only trained with their pupils in shared events, as I believe that teachers learn most effectively with their pupils when engaged in self-determined learning as a group member and not divorced from their pupils as in traditional staff training.

The operation of the digital classroom supplemented my experiments in heutagogical learning and started producing marvellous results. In 2015, the class V batch students (aged 10 years) achieved best results in our state assessment and the book written by 13 students named, "Letha Akasalu (Tender Skies)" was released in 2015 in the Book Festival in Visakhapatnam. This book was written by the students to show how they have learned through heutagogy and the digital classroom.

My work since 2017 has taken on both a national and international turn through contributions to conferences in Finland, India and New Zealand and in collaborative work within India, and with the UK developing the Heutagogy App with "Happy adda Studios" and working with Fred Garnett on "Wiki Qualls" in Heutagogy for Teachers. We now have a community of teachers who are working on heutagogy and their projects will be internationally showcased in "Heutagogy for Teachers" as WikiQualls "sqolars" on 26th September 2020 (World Heutagogy Day 2020).

At school, we have now purchased new tablets and a laptop so that both children and their teacher can work on different tasks during a lesson and enhance self-determined learning technically as well as directly: face to face communication and the implementation of digital technology for learning, going hand in hand.

Postscripts-September 2020

In March 2020, we had to close our schools, due to the effects of the COVID-19 pandemic. This was a great disappointment as the Heutagogy App was being run every day. March and April were to be the most crucial months for its use, but heutagogy, self-determined learning, saved my kids from isolation and the other negative effects of this terrible virus. Ours is a backward area, and none of the homes had computers or any digital equipment, but more than half of the parents had android mobile phones. This was a boon for us. Thus, we started using our school parents WhatsApp group (that was created for administrative and communication purposes at the start of 2020) for educational purposes now.

As soon as lockdown was imposed, we started a teaching bridge course through the WhatsApp group. I make regular video calls to students and their parents and talk to them about their progress on their 'home' work and help deal with their doubts. Students do the work and send the photographs of the work through WhatsApp. This has been a good experience, and I have discovered that I am more emotionally connected to the parents as well as students during COVID-19 lockdown.

This local experiment has worked well and was covered by local newspapers and BBC Telugu at New Delhi. The other students who did not have android mobiles and could not yet participate fully were not forgotten, but were given more general work through their more basic mobile phones. However, this cannot be personalized in the same ways we manage with the Android phones. Now, the government of Andhra Pradesh and the Education Department are providing lessons through Doordarshan (TV) every day. Students watch lessons on TV and do the work in their books provided. It has now become easy for us to guide them through our WhatsApp and mobile phone links. COVID-19 proved that heutagogy is the best method to provide “lockdown” learning when such a crisis occurs. Students are doing their work on their own.

While managing to support learning in a crisis, we are not standing still! We have now submitted a proposal to the commissioner of school Education, Andhra Pradesh to sanction a “Heutagogy School” as a pilot project and awaiting approval with our fingers crossed.

Phillip Ecclesfield: Self-determined learning in a pre-school setting

The key issues in embedding self-determined learning in the early years are, broadly, threefold. Firstly, educators are primarily introduced to teacher-led approaches and frameworks of learning and teaching that see early learners as needing to learn through direct educator input; secondly, the life experiences of learners are relatively limited (due to their young age, among other factors), although the capacity for learning in areas such as both gross and fine motor skills and vocabulary acquisition is great; and thirdly, for considerations of physical safety ensuring the protection of each early learner in potentially risky learning and play environments such as the setting described below, where self-determined learning meets limits that are imposed by the practitioner/ facilitator in the first instance, and insurers, inspection agencies and other invested bodies in the second instance.

It is worth noting, however, that developments in education from Scandinavian countries such as Denmark, and the rise of the *uderskole* (Bentsen & Jensen, 2012), outdoor classroom, methodology is filtering through to educators in the United Kingdom alongside such local developments as “forest schools”. Closer to home, the Scottish Government has also been pioneering outdoor learning approaches through their “Curriculum of Excellence through Outdoor Learning” (Learning & Teaching Scotland, 2010).

My context

Outdoor Owls operates in the early years sector (for children aged from 2-5 years). The learning environment that is used (for the majority of the day) is one acre (0.25 hectares) of open land on the edge of the River Thames. It contains a mixture of woodland and grassland, which early years learners can flow between freely, as they follow their interests during the day. Learners are supported by their educators/practitioners, who operate in a ratio of one member of staff to four children. This offers freedom of movement while ensuring learner safety and providing opportunities for engagement around, for example, observed and found flora and fauna.

We have some semi-permanent structures by way of a tipi and shed which are both specific in function during certain times of the day (for sleeping and for nappy changing), but also transient at other times depending on the requirements of the learners.

Our local community is that of South West London (Richmond on Thames). We have begun to create close ties with our local communities within walking distance of our learning environment, for purposes of providing new and varied learner experiences. These include care homes, libraries and historical buildings that provide engaging contexts for our learners within their home locale, as this broadens their knowledge and depth of understanding of the immediate world and community around them.

Our educators support the learning and development of the children in our care using child-led, play-based approaches to learning combined with tracking of wellbeing and involvement. In addition, each child's learning and development is monitored according to the Early Years Foundation Stage (EYFS) curriculum which governs the operation of approved early years providers in England. A central part of this work is building relationships with learners, parents and other family members evidenced by the regular communication and sharing of video diaries between our practitioners and learners, with their families during the closure of our nursery during the COVID-19 lockdown.

'Disguised' under the term 'child-led', our approach to supporting the learning of the children at our setting is heutagogy. By this I mean that primarily the learning is from the learners themselves through their play, interactions with their peers and the educators that support them, and the engagement that they have with new experiences available to them, that they can choose to engage with at any level they desire, including no engagement at all. This heutagogy approach to learning in the early years has been present for a considerable time through various forms and theories: historically with Friedrich Froebel, the development of the Reggio Emilia approach, through to Dr David Whitebread, the first Professor of Play, and the work of the Lego Foundation.

Although heutagogy has been conceptualised in the early years, it has been directed at the self-determination of the educators, rather than that of the learners that they seek to support. The manner in which early years learners self-determine their own learning and development, however, is fundamental to the development of heutagogy because it shows the earliest signs of educator-learner interaction that promotes the learner's ability to learn for themselves, and engaging methods of learning. How this happens is through a combination of enabling environments and facilitation of play towards the advancement of learners' conceptualisation or practice of emergent skills.

Methods of planning retrospectively, provide a wider and deeper collaborative process between the learners and the educator. Retrospective planning involves the recording of the self-determined learning and play that the learners engage in each day and using that to organise resources and plan for activities that provide a continuity of learning as well as building next steps for the development of learning from the recorded activity. By engaging learners through play in this way, their learning progresses rapidly because they are interested in the activities they are taking part in (if they don't like it any longer then they find something new to do) while being nurtured with questioning and new ideas by the educators facilitating the play. As Vygotsky (1978) points out, a child's play allows them to exhibit behaviour beyond the expectations of their chronological age, which further facilitation can then support to bring on. Mitra (2019) makes similar points in demonstrating how in Self-Organised Learning Environments (SOLEs), children of school age can show attainment beyond their chronological ages.

As I am responsible for practitioner training, I work with my colleagues to promote their learning, adopting the same principles I adopt with learners. This involves identifying activities to meet their interests and aspirations, while taking account of the contextual issues framing their learning, which may include formal qualifications in early years education and statutory training in health and safety and first aid. In these qualifications, the principal issue for me is the relevance of the planned learning activities to the participants' needs and their congruence with the qualifications being pursued, or to the demonstration of skills required by statutory or licensing agencies. Within such contextual framing of training, it is essential that participants are enabled to negotiate learning activities and follow their own learning trajectories to allow them to experience self-determined learning for themselves. In addition they can appreciate the difference between the pedagogic approaches traditionally employed in early years and heutagogy with its promotion and development of learner agency in collaborative environments.

Conclusion

As will be apparent from these short accounts, both Vijaya and Phil are able to visualise their practice as learner-centric, while operating within formalised systems of assessment and accreditation that are intended to ensure attainment and maintain children's safety and achievement within their national educational systems. It is also apparent that their work exists in liminal spaces, both cognitively and geographically, that is, on Saturdays at Vijaya's house or in the open spaces where Phil and his colleagues work with children. Both Vijaya and Phil can be characterised as craft

professionals who are continuously developing their skills and practices through their engagement with learners and the wider community and, also, with organisational ecologies of learning and teaching. Their work is helping to challenge existing conventions that view learners and learning as incorporated in formal structures such as school buildings and the hierarchies that operate them and, also, state or national curricula which are subject to political direction and control. This brings us to architectures of participation, which can be seen as immanent in the accounts above and which we (the authors) will explore through our future collaborations.

Since 2007, both Fred Garnett and Nigel Ecclesfield have been developing evolving definitions of “architectures of participation” in their blog (<http://architectureofparticipation.wordpress.com>) and in a number of papers and other media. This is in contrast to O'Reilly's (2005) original use of the term when defining Web 2.0, which sees participants in terms of their provision of data for use by service providers in developing services in a business context such as Facebook. The most recent formulation of the term by Ecclesfield and Garnett (2020) can be found in their book and have published a detailed comparison of their ideas with O'Reilly's original conception in the Architecture of Participation Blog (<http://architectureofparticipation.wordpress.com>).

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Chapter 13

Techniques for Self-Determined Learning in a Heterogenous 'Classroom'

Motladi Angie Setlhako

TPACK

Instructional Design

Diversity

E-Learning

Distance Learning

Padagogy Wheel

South Africa

For education to create and develop a self-determined learner, it is imperative to utilise the best approaches to teaching and learning and to ensure that students are empowered by giving them the opportunity to make choices, manage and control of their own learning. This chapter provides techniques to self-determined learning or heutagogy in a heterogeneous classroom. A heterogeneous classroom is composed of diverse learners with varying abilities, different learning styles, language and race, among others. This holistic approach to teaching and learning requires educators to allow students to take the reins of their learning and to relinquish dominance by facilitating learning instead of centering teaching around themselves. To prepare learners for future careers, the 21st century learner would require new, complex and wide range of cognitive and metacognitive skills (Blaschke 2014, p.1) which includes curiosity, innovation, problem solving, decision making and self-control.

Introduction

The University of South Africa (UNISA) has been a distance learning institution since its early beginnings in 1916, providing higher education to thousands of adults who were not able to pursue higher education face-to-face. The models of learning informing the institution's provision have been very diverse over the last one hundred years. The university has become the largest provider of teaching degrees in the country with the demise of teacher training colleges. *Being a Professional Teacher* is a compulsory module for all students enrolled to become teachers at UNISA. It is offered by the College of Education (CoE) at UNISA. The CoE offers all teacher education programmes and produces more than 50% of teachers in the South Africa. For many first year students, enrolling at the university having come from face-to-face learning institutions, e-learning is often novel and challenging. The purpose of using an e-learning approach for first year students is to enable learning, allowing students to access information electronically, empower teachers and students through the use of digital technology (Abbad, Morris, & de Nahlik, 2009; Bates, 2005; Keller & Cernerud, 2002; LaRose, Gregg & Eastin, 1998).

Generally, technology has provided more people access to education. E-learning provides access for all students, particularly for distance learning students, irrespective of their location and enhances opportunities for learning in many impoverished and under-resourced rural areas. Increased access to information and education, as a whole, means the role of teachers and lecturers must also change (Vandeyar, 2014). Using technology, creates a world of new discovery and exploration (Setlhako, 2018) and as facilitators of learning, lecturers need to encourage, support and engage

students so that they participate actively in the learning process. This is a major way of ensuring that lecturers as facilitators of learning provide relevant knowledge and skills related to societal and educational needs, especially in times of rapidly changing technology and economic uncertainty. Technology enables people to have easy access to information to keep functioning, in times of economic uncertainties, through internet connection using online platform. Hase (2016) asserts that it becomes easier for people to fulfil their abilities as self-determined learners. It also gives people innovative incentives to be creative and find new ways to improve their lives.

However, the so-called 'digital divide', an unequal access to information, communication technologies (ICT) and, therefore internet access, is a factor to consider given the demography of most of the UNISA students. The student population is very heterogeneous with respect to culture, race, religion, learning styles and linguistic backgrounds; family structures; socio-economic status; and ability levels (Kronberg, York-Barr, Arnold, Gombos, Truex, Vallejo & Stevenson, 1997). The aim of obtaining a teaching qualification in this program is to develop teachers, whatever their background, who have mastered the 'four Cs', namely critical thinking, creativity, communication, and collaboration (Blair, 2012), appropriate employability skills and competencies required for the 21st century and the changing world of work as well. They will have developed cognitively and exhibit critical thinking skills and become experts in their content and pedagogical knowledge (Blaschke and Hase, 2015; Brown, 2015; Salehi, 2018).

What we can add to content and pedagogical knowledge now is technological knowledge (Kurt, 2018). Students need to integrate these three types of knowledge, technological, pedagogical and content (TPACK) into their learning (Kurt, 2018; Mishra & Koehler, 2006).

The South African Higher Education Act (1997) states that one of the purposes of higher education is to provide South African society with high-level competencies and expertise necessary for the growth and prosperity of a modern economy. The South African White Paper on e-Education (DoE, 2004) states that South African students should be able to use Information and Communications Technology (ICT) so as to fully participate, confidently and creatively, in a global society. This technological knowledge and skills need to be embedded in modern education. As all institutions of learning are mandated to embrace e-learning, it is required of them to develop new and relevant approaches to teaching and learning.

Learning

There is a growing awareness in educational circles that students have a role to play in the teaching and learning process, given the opportunity (Daly, 2008; Freire, 1972; Hill, 2015). However, in the South African context because of cultural factors, there remains a strong perception that the best ways in which people learn occur from respecting seniors, considering their experiences and involving them in the planning of activities, or providing a conducive environment, but ignoring their unique style of learning (Richards, 2002). In Africa in traditional societies, patriarchy remains a strong element of culture. The system encourages a resistance to questioning, critical thinking and going against the tide.

Lave and Wenger's (1991) 'situated learning' and 'community of practice' seem at present to speak most directly to the needs of 21st century learning. This type of approach to learning makes it possible to include ideas about social and global responsibility so that students understand their social and civic responsibility (Hurtado, Ruiz, and Whang, 2012) from a young age. In addition, as countries are gradually becoming interconnected and the global markets improving through technological advancement (United Nations, 2019), new occupations that require different skills and competencies are founded. Such innovations call for education to change and the way they in which knowledge is delivered will need to change. Thus, the imperative for today's teaching and learning is to identify the new skills sets that will equip tomorrow's students with skills that will enable them to deal with the challenges of the Fourth Industrial Revolution.

Heutagogy challenges the traditional way of teaching and learning. Researchers such as Alraqas (2020), Hase & Keny (2007) support the view that learning has become more self-directed and self-determined. In this learning approach, f

example, students are required to critically interrogate their own thoughts, learning and reflecting on what is learned and how it is learned. Heutagogy (SDL) as a major shift towards learner-centred learning could assist South African educational institutions to move away from a passive teacher centred approach to a more active, learner centred approach. This means there is a growing acceptance that students should play a greater role in the teaching and learning process, given the opportunity (Daly, 2008; Freire, 1972; Hill, 2015).

One of the pillars of heutagogy is the autonomy that students have to develop and acquire. As that happens, educators have to relinquish their total control of learning, shifting to a learner centred approach, if they are to thrive in a heterogeneous classroom. This is a huge change, where students need a new framework of learning and teachers a new teaching framework that empowers students to take responsibility for their own learning. An old mind set in the South African context, related to cultural factors, suggests that the best way students learn occurs from respecting seniors, considering their experiences and involving them in the planning of activities, or providing a conducive environment, but ignoring their unique style of learning (Richards, 2002). In this case, critical thinking and autonomy could create a barrier to the successful implementation of a heutagological approach.

Figure 2

Self-determined student

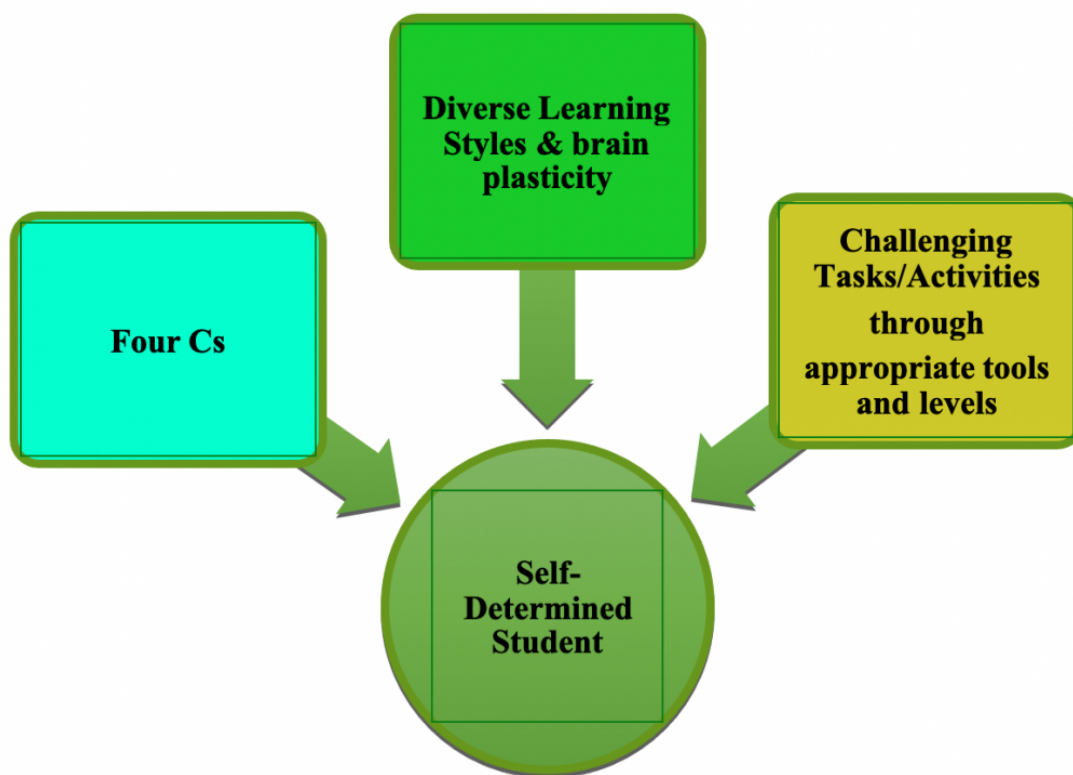


Figure 2 shows how the student is guided towards self-determined learning through the provision of instruction at appropriate levels (after Bloom) mediated through appropriate technological tools (Cennamo, Baum, Newbill & Finn, 2012; McNierney, 2004). The instruction takes into account the diverse styles of learning of each learner, their heterogeneity on so many levels, and with the development of critical thinking skills, the learner becomes autonomous. Not only does self-determined learning require motivation to carry out tasks, it is also about how people learn, and the capability to unlearn existing methods.

Self-determined learning also challenges the curriculum and explores new ways of teaching and learning. It, therefore requires engagement and social interactivity between, students and students, students and teachers as well. Vygotsk (1978) argues that optimal learning takes place when taught from a social interactive paradigm in which students are encouraged to share, exchange, negotiate and make meaning to help construct new knowledge. We need to design education systems that are based on the “optimism of the students, not the pessimism of the educators” and heutagogy, as a learning process that is learner-centric would help us to do that.

User-centred instructional design for effective teaching and learning

The learning partnership in which the students and the lecturers are placed in an e-learning context requires a knowledge of user-centred design theory and practice to effectively deliver the content of the course (Newby, Stepich, Lehman & Russell, 2000). Each page design, for instance, should reflect such principles as chunking, use of sidebars, and multiple headings; readability levels should be between 8 and 10 (Campbell, 2004). Goals need to be clearly articulated, as does the value of the learning for the students in pursuit of their own ambitions for success (West, 201

The problem of having a diversity of students should compel the design to be 'participatory' (Schuler & Namioka, 1993). By designing different learning activities and tasks that accommodate many diverse styles of learning, students are helped to recognise and determine for themselves the best way in which they learn. The designer of the programme should take into consideration a number of matters which are important for a heterogeneous student body, such as English language fluency, study habits, communication habits, time available for finishing assignments, gender, mobil and accessibility (Campbell, 2004). UNISA used to separate the design elements of the course from the content. It fal increasingly on the lecturers now to design online courses. The need for teachers to be proficient in instructional desi has become more and more important. A needs assessment of the students when preparing or revising the programr goes a long way towards effective teaching and learning and assists students to take ownership of their own learning when their needs are met.

Bloom's taxonomy is a foundation tool for instructional design (Shabatura, 2013). Using Shabatura's *Bloom's Taxonom Verb Chart* to choose suitable verbs to match learning outcomes at the different levels of understanding from lowest to highest, is another technique in effective instructional design. Campbell's (2004) provides extensive and valuable adv as well as excellent sources for further techniques to consider in instructional design for e-learning. The design of activities in e-learning should be structured in such a way that students are given the opportunity to work on their own groups, pairs or independently. It is about time that educators relinquish their classroom dominance and shift the foc of learning from the teacher back to the learner and learning (Blaschke & Hase, 2016), and take into consideration the unique learning styles and human intelligence of each learner, if we are to produce a true self-determined learner.

In response to market demand for creative and competent employees who can respond to new and complex work environments, there has been renewed interest in heutagogy. When combined with today's technology, heutagogy offe a holistic framework for teaching and learning that supports development of self-determined, autonomous students and provides a basis for creating holistic, learner-centred education environments (Blaschke and Hase, 2016).

Delivery of e-learning

The plethora of digital devices, both stationary and mobile, which enable access to e-learning should not seem daunti as they are tools which can be used to good effect with good planning. Carrington's (2016) Pedagogical Wheel is an elementary illustration of how to match the levels of Bloom's cognitive taxonomy to the desired learning outcomes an the technological mode or tool which would be most suitable to use, so that theory, practice and application are linked (Carrington (2016). The wheel can be found at: <https://edtechbooks.org/-myr>.

This is a valuable aid to lecturers and the internet has videos and many supportive materials free for use. Managing the outcomes of one's e-learning programmes with help from internet support should assist lecturers who are not au fait with technology (McNierney, 2004). That expertise developed and passed on to pupils gives impetus to both parties and students.

Teaching as a profession cannot be seen in isolation from technological advancements. More than just technological literacy needs to be taken into account, a greater focus on the integration of technology into lecturers' instructional practices, and a review of teacher professional development of post qualification and new approaches and curriculum pre-qualification is urgent. It is predicted that students will be expected to learn beyond just answering basic questions and to expect new cognitive pathways (World Economic Forum, 2017). They will want their curiosity to be aroused. Jamwa at WEF (2017) stated that if we do not change the way we teach, thirty years from now we will be in trouble, if students are not prepared now.

Developing critical thinking skills

As one of the so called 'four Cs', critical thinking is a necessity for the 21st century (Blaschke & Hase, 2015; Brown, 2015; Salehi, 2018). It is the ability to think clearly and rationally, understanding the logical connection between ideas, thinking about one's own thinking (Lai, 2011). It is assumed that critical thinkers are at a level where they are able to engage in dialogues, question ideas and reasoning (Guest, 2000; Lloyd & Bahr, 2010). They ask questions, reflecting on various issues as an indication of thinking independently. They rely on a scientific mind-set, not a superstitious one (important for South African students). Skills for critical thinking are a crucial resource that resonate with a self-directed teaching strategy (Snyder & Snyder, 2008).

It is assumed that university level students must have reached the level of critical thinking asking hard questions. Unfortunately, it is not always the case, considering the situation and context in which many of UNISA students exist. A self-determined approach to learning requires students to have developed critical thinking skills. These skills involve cognitive operations that enable them to interpret and/or analyze, solve problems, create, synthesize and evaluate (Basri, Purwanto, As'ari, & Sisworo, 2019; Nilsson, 2018). These are much needed skills even beyond career development. They can be developed, learned, practised and continually integrated into the curriculum to engage students in active learning (Blaschke & Hase, 2015; Salehi, 2018). For example, developing skills at a lower level would include reading a newspaper article and discussing how they comprehend it, writing a few paragraphs explaining their understanding of the content. This represents a lower level of Bloom's Taxonomy.

To evaluate or assess whether the students have become critical thinkers who can solve problems, there are several suggestions from Kivunja (2015). Examples are tasks which show that the students have reflected on what they have learnt and discussed, its value in real life situations, debated a controversial issue from public media, performed a self-assessment exercise after completing a major project, reviewed how they have achieved the programme's learning outcomes and shown they recognize bias and misinformation in internet resources.

Cognitive development and self-determined learning

To help students become self-determined students, it is important to give those challenging activities and questions that stimulate their thinking, forcing them to critically examine their existing perspectives (Vygotsky, 1978). Challenging tasks promote cognitive development and metacognition grows when students interact with other people and learning material. Cognitive development through social interaction, between people, students and student, student and lecturer and/or tools that facilitate learning are recognised as excellent learning opportunities in an indirect way (Mutekwe, 2018).

Most important in the self-determined learner is thinking about one's own thinking - metacognition. Metacognition is the act of thinking about HOW? and WHY? (Siewierski, 2015). The how and why questions are ways of asking oneself deep questions, introspecting on one's beliefs and reflecting. Employing metacognitive strategies to learning helps students

become aware of their development, understanding of issues as they keep on reflecting on their work. This leads to independence, the results suitable for self-determined learning. Self-determined students will be able to think, analyse, reflect, plan and organize, monitor their own work, direct their own learning, and to self-reflect along the way. Ongoing practising of this strategy is empowering and encourages students to take charge of their own learning.

Learning and teacher competencies required for self-determined learning

Students need critical thinking, problem solving, creativity, communication, decision making skills and more to construct new knowledge through pedagogical use of technology. To do that e-students in distance education need to develop skills associated with self-determined learning because as independent students they would need to make choices, set priorities and manage own lives, make decisions (Hui & Tsang, 2012) to succeed.

Unfortunately, our South African society remains patriarchal, authoritarian, non-critical and this is a prominent feature of our education process. So, for the learner to develop agency to empower her/himself, to gain problem solving skills, reflective skills, self-evaluation and monitoring skills are needed whether in academic learning, vocational learning or self-management and development learning through being encouraged to use action learning, goal setting, process management, and outcomes determination. In an environment of self-analysis, the learner can develop a positive “Yes I can” philosophy. In turn this attitude enables teachers to more effectively facilitate knowledge acquisition, while the learner can test their process against goals and objectives. Development of new learner-teacher partnerships, in which the teacher guides, rather than teaches, could lead to deeper learning, understanding and appreciation of the subject content through using action learning – breaking up learning into bite-sized goals once outcomes have been identified and using peer discussions to achieve self-realisation.

Self-Determined Learning in a Heterogeneous Classroom

Developing techniques of self-determined learning in a heterogeneous classroom may be difficult, given the range of learning background and abilities of students enrolled for the module. Heterogeneity in any one classroom would represent students with diverse cultural, racial, religious, and linguistic backgrounds; family structures; socio-economic status; and ability levels (Kronberg et al., 1997). However, it is the responsibility of the facilitator to motivate and encourage students to identify own learning style as students with diverse backgrounds and abilities pose different challenges (Diallo & Maizonniaux, 2016). It is important to set meaningful, inclusive and effective assignments and activities to serve all students (Vedder, Horenczyk, Liebkind & Nickmans, 2006). It would then mean the facilitator would design activities and tasks to accommodate students of this diverse group. As self-determined learning is a student-centred teaching strategy and meant to develop independence, build capacity, capability and the future of many students, activities should be designed in a way that meets the needs of all students. Nonetheless, embracing diversity is conducive for development and learning, having to understand the style of learning employed by many students.

It is known world-wide that technology has made it possible for people to access data and resources in their environment, share information using diverse multimedia, and also collaborate with each other (Luckin et al, 2011). This is a requisite for the heutagogical approach to teaching and learning. Generating a conducive learning context for the learner is imperative to support students to access and use technological resources effectively as an empowering technique for students to become independent and able to create their own learning contexts. A learner centric environment for example, provides students with the opportunities to develop own learning materials, record own videos or audio and then share it with other students online. Activities of this nature may accommodate heterogeneity

Conclusion

With all institutions of learning moving towards and finally embracing the world of distance learning, otherwise known as e-learning, such a time would require the moving away from old and outdated ways of teaching, into new and relevant approaches to teaching and learning. As mentioned above, it is no longer in the interests of both the students and the teachers to consider mundane teacher-centred learning approaches, in their passivity, as the “best learning methods”. Students, particularly in the 21st century, are required to be critical thinkers, problem solvers, creatives, communicators and decision makers among other things in order to succeed within environments of independent learning. Self-determined learning in a heterogeneous classroom would thus be the most feasible solution, as it allows students to take initiative for their own learning – in terms of identifying their learning needs and resources, formulating personal learning goals, implementing strategies for problem solving, while reflecting on the entire process of learning.

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Chapter 14

Heutagogy in Action: An Action Research Project in Art Education

Andy Collis

Reflective Practice

Art Education

Heutagogy

Self-Determination Theory

This chapter describes the journey of a teacher (learning leader) and his students (learners) in applying some innovative approaches to enhance learning in a higher education setting. Based on the principles of heutagogy or self-determined learning, the learning leader used action research to implement and investigate some innovative learning experiences in a History of Art class in an Australian university. For both the learning leader and two groups of learners, this experiment in learner-centred learning was very successful because the delivery and receiving of required essential course material became less predictable, less prescribed. This created a sense of spontaneity and discovery of knowledge. Such engagement in the process makes for more meaningful learning and interaction between parties. The impact of implementing a heutagogical approach encouraged other lecturers to re-examine their teaching methods to re-structure some of their units of teaching.

Introduction

This project was undertaken at an Australian University and involved redesigning a subject within a visual arts degree using heutagogical principles. The subject is called 'The History & Theory of Western Art' and unlike other art-practice units, this unit is primarily theoretical, involving the analysis of key artworks rather than engaging in practice. Over the twenty-five years of having taught this unit, the learning methodology had remained essentially didactic via lectures with little time for discussion. Having attended a heutagogy workshop, I recognised that my learners might better identify relevance to their own art practice if I could make the subject more learner-centric rather than teacher-centric using heutagogical approaches. Thus, if some experiential engagement with the information could be designed, then it might become applicable to the learner's own art practice, providing a strong sense of purpose to continue as practicing artists outside, and beyond the requirements, of the degree. The rest of this chapter describes how I went about transforming this course and what happened in the process.

The process

Two cohorts of undergraduate students, in successive years, took part in this project. Each course was run over thirteen-weeks. There were 12 students in 2017 and six students in 2018. Their age range was 19 to 25 years, with a 68-year old woman in the first cohort. I explained at the outset that I was going to attempt a new approach to teaching the subject using heutagogical principles and told them what that entailed. The learners were also informed that I would

seek feedback about their experience during and at the end of the course. I took weekly reflective notes, about the effectiveness or otherwise of the heutagogical approach. This included examination of assignments and student feedback. Half the students responded to the invitation to provide written feedback about their learning experience.

Reflections

Reflections on preparation of the lecturer for the heutagogical approach

While designing heutagogical approaches, the prescribed accredited degree's "unit learning outcomes" could not be ignored or altered. The organisation and planning of the delivery of content was shaped by a major review of *all* participant's roles. A fundamental shift in mind-set saw me approach the content as a "learning leader", as opposed to "lecturer" and "students" saw themselves as "self-learners" (Hase, 2014b). It was anticipated that all would experience a noticeable difference in the learning environment and how subject matter was shared rather than experiencing the more traditional hierarchical framework, which employs dispensation of information from above to empty vessels below, with varying degrees of engagement.

Wanting the learners to have more engagement with class-content I, the learning-leader, needed to design a format of delivery that allowed for more lateral thinking and participation, while still maintaining an underpinning pathway to prescribed goals. I re-visited original power-points, stripping out "fillers" to leave windows for more participatory filling of gaps by learners. Short introductory narrated videos – maximum of 10 minutes – and a PDF of main images, were posted weekly and online to provide an overview of forthcoming class content. This gave learners advanced viewing, enabling thinking or research time prior to discussion in the wider group.

Assuming learners had little previous knowledge, this encouraged the learner's own critical thinking in anticipation of classroom discussion. A short video was also posted after the class, re-capping what had transpired. Any learner apprehensive about displaying a weakness in this unit had these pre-class resources to facilitate confidence-building. This process empowered the student to transition to a more learner-centred approach of study.

Reflection and action: Organising the learning

Learners appreciated the breadth of content available to them before the course. They remarked that they had looked over the PDF and video presentations. This encouraged class attendance, either because it appeared the class would be interesting, they had some self-confidence in what was expected of them, or they felt they would miss out on participatory experiences. Learners felt online content helped with revision for assessment items. The post-class review videos informed absentees of what they had missed. It not only brought them up-to-date, but also encouraged them not to miss classes for fear of missing out again.

Creating opportunities for personal choice declares, subtly, that the learners have more control of their learning. The study area therefore became more fluid to the extent that a "tea-trolley", with tea and coffee and accompanying chocolate biscuits and soft drinks, was set up in the classroom. Having short breaks in the same room avoided breaking up the group atmosphere, allowing continued interaction. Conversation about artworks continued seamlessly in the informal setting. The cost of refreshments far outweighed the value afforded to the learning experience. Rather than a break in learning, another way of sharing or re-capping class content was experienced. It also had the advantage of breaking down perceived hierarchical barriers between peers and/or "lecturer" and "student". It allowed quieter individuals to talk about their ideas in a less formal setting, giving them a sense of inclusion in discussion. Some maintained it contributed to their overall enjoyment of the session, impacting on their decision to attend weekly classes.

Reflection and action: The flipped classroom

As images and support information was available through the intranet, learners could prepare for sessions, reminiscent of the flipped classroom technique (e.g. Lage, Platt & Treglia, 2000). Having looked at images in class, grouped learners discussed them in terms of *content*, *form* and *function* at the start of an exercise, which employed a

variation of the World Café method used to share information and ensure maximum input. Having split into small groups, an elected chairperson documented the discussion in bullet-points. The chairperson remained with half of the table-group while the rest of the table-group rotated around the other tables, taking the ideas from their initial discussion groups and contributing to the findings of the next table until all ideas were shared. My role here was one of stimulating discussion and adding any information that had not been considered. This requires the learning leader to be totally on top of their subject (Hase, 2014), being capable of intervening when necessary, so that all information is brought out while avoiding control or restriction of the way by which information is obtained.

Another exercise discussed artists' representation of Parisian life in the late 1800s and early 1900s. Learners then sought out one image, via their mobile phones, that would typify *their own* experience of 21st Century life. This meant exploring the meaning of "modernity" to them and their own times. They then arranged their devices on the floor, discussing their choices so as to best express the concept. This exercise was successful in both cycles. This practice and discussion brought older ideas into a contemporary context and gave them relevance.

Action and reflection: Experiential learning, emotion and reflexivity

Positive emotional experiences have been consistently shown to play a critical role in learning (Den Ouden et al, 2013; Tyang, 2017) and is a major component of heutagogy (Hase, 2016). Experiential learning has also found neuroscientific support in embedding learning (Schenck & Cruikshank, 2015).

This way of learning was applied to the investigation of art movements. Citing Marcel Duchamp's exhibiting of an upturned urinal of 1917, learners were asked, "Do you think that simply by an artist selecting something and calling it art, makes it art?" Learners lined up, with those on the extreme right representing "No, not at all" through a range of those on the extreme left representing, "Yes, of course." At the end of class this exercise would be repeated to see if opinions, through the practical experiences and group discussions in class, had shifted. This exercise was designed to encourage the learner to consider gut-reaction, based on limited knowledge, by comparison to informed response. Learners engaged in the discussion about initial impressions versus considered decision-making. Feedback was positive.

Further emulating Dada practices, learners created their own version of "The Cabaret Voltaire" nightclub in Zürich in 1916. An array of activities mirrored the cacophony and disrespect for the establishment akin to original Dadaists. This activity was very successful for both groups. Amusing and liberating while being instructive, it encouraged learners to be uninhibited, and required the learning leader to be equally participatory. This exercise facilitated meaningful learning through memorable lived experience.

The 1960s art movement, Fluxus, was approached in a similar way. A brief overview of Fluxus was given and, as its founder John Maciunas had done, a printout of his manifesto was flung out at the audience. Following the viewing of a YouTube recording of John Cage's famous silent musical performance, *4 Minutes 33 Seconds*. Class-discussion showed polarised responses from learners.

Having studied Dada, learners were not fazed by the experimental nature of Fluxus, but neither did they seem impacted by it. Being a musician myself, I was concerned with the complacency with which learner/audiences were accepting such art images, such as the *Solo For Violin* – a performance piece where the artist follows a written "score" that leads to the destruction of a violin. To counteract learners' complacency, I took what looked to be a perfectly serviceable guitar, and, following Maciunas' score to *Solo For Violin* – which has no formal musical notation but rather written instructions – began playing a "sentimental tune". Then, as the score required, hammers and nails, and eventually saws and an electric drill, were used on the guitar. The startled learners then contributed to the destruction of the instrument.

Learners' emotions ranged from bemusement and amusement to concern for what, from a conventional understanding of a guitar's use, resulted in a destroyed instrument. They then reflected on these feelings as a means to enhancing learning (Dweck, 2006). In both cycles, mobile phones voluntarily emerged – learners documenting the "happening" for themselves with a view to sharing with others through social media. Posting content taken from their

theory classes indicated that the learner saw relevance to his or her contemporary world and social sphere, demonstrating that academic information had become valued, meaningful knowledge.

Reflection and action: Engaging the senses

When investigating the artistic practice of collage as in the works of Cubists, Dadaists and Surrealists through to that of Pop art and subsequent “remediation” and “recycling” of imagery and sounds of post-modernism and beyond, I engaged in class “parlour-games” to demonstrate the interweaving of the arts and wider culture. I would perform songs, accompanied on guitar, with projected lyrics and associated images, so that these could be discussed in relation to artworks.

Feedback from participants was that such live performances lent association to, and recall of, historical information. Learners cited the spontaneity and break in mood as enhancing and contributing much to their learning experience. This is consistent with the way that engaging multiple senses improves recall, which is essential for learning (Shams & Seitz, 2008).

Reflection and action: Consolidating learning

In Class 1, major works that had been discussed were collated onto one screen for quick re-cap purposes. In Class 2, this was substituted by the more interactive online *Kahoot* quiz format. (The *Kahoot* quiz is set up online prior to the lecture – questions and content are set by the lecturer to target or revise whatever topic is appropriate.) Learners used their own mobile phone devices, created a fun nickname and competed against each other, and against time, to answer the questions; music and images could be used. The *Kahoot* end-of-session quiz was incredibly popular. Learners volunteered that it helped them consolidate their learning, and reinforced that repetition is essential for long term memory (Maccotta & Buckner, 2004).

Reflection and action: Experimentation

A great deal of learning from birth is achieved by exploring, by being engaged in doing things and discovering how the world works. The more satisfying, engaging and exciting the education process, the more internally reinforcing it is to the learner through the release of dopamine (Willis, 2006).

For the session investigating the Fauves art movement, I drew outlines on canvases of works from earlier periods of Art History – Da Vinci’s *Mona Lisa* or John Constable’s *Haywain*, for instance. A colour reproduction of these originals were on-hand while learners painted-in the outlined images using reversed/complementary colour values of the originals, applying paint more abrasively – apropos *Les Fauves*. Learners discussed the nature of the original works to that of the works they had recreated in the Fauve style.

The practical working through of the Fauvist theory and technique opened-up the learners’ appreciation of this modernist movement. One learner decided to use a mobile phone to look at his/her? own ‘fauve-like’ rendition. By turning the mode to black and white, they could compare the tonal values of the radical colours to the tonal values of the original work. This was a significant learner-led break-through. Learners all took to looking at their works in this way and recognized how tone is related to hue and colour – in short, how Fauvism works. Similarly, after a brief overview of iconic cubist works, a practical drawing session cemented academic information through lived experience. Preconceived biases from learners questioning the merit of some Modern and Contemporary art movements became much more balanced and informed.

This impact of practical workshoping was perhaps best demonstrated in the session addressing American Abstract Expressionism. Having discussed some pivotal Jackson Pollock works, learners mixed, then threw, dribbled, and poured paint onto a huge canvas on the studio floor. Animated discussion ensued as to what colour to use and where to pour it, what technique to use to go over preceding colours. The learners’ meeting with “Jack the Dripper” was, suitably, a visceral experience. In this practice/learner-led approach, learners experienced and recognised theory in practice and, perhaps more importantly, saw application of the knowledge to themselves as practicing artists. Learners displayed practical artworks made in the theory classes on the university walls. Such displays gave extended credence to the

work. Such positive “advertising” of an available subject within a degree course attracts other learners from other courses. Having learners enthusiastic in choosing classes equates with the viability of courses.

Conclusion

For myself, the learning leader, and the learners, this experiment in learner-centred learning was very successful because the delivery and receiving of required essential course material became less predictable, less prescribed. This created a sense of spontaneity and discovery of knowledge. The experience was a huge shift from didactic teaching to a learner-centric approach. Feedback from the learners was extremely positive, with learners feeling they had contributed in no small part in shaping their learning experience. The impact of implementing a heutagogical approach encouraged other lecturers at the university to restructure some of their approaches to teaching. While this was a small case study, it might provide other learning leaders with some ideas about applying heutagogy in their own setting, whether it be in school, higher education or non-formal educational settings.

I hear and I forget; I see and I remember; I do and I understand.

— Confucius

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Chapter 15

Heutagogy and researcher education: Unleashing the power of the novice researcher's agency

Maria Northcote

Novice researchers

experienced researchers

PhD candidates

research training

researcher education

higher research degrees

Novice researchers become experienced researchers by developing their skills in varied contexts, typically within higher education institutions as part of their university degrees. This chapter focuses on the novice researcher who progressively develops their research capacities during the process of completing a PhD (Doctor of Philosophy degree) within a higher education institution or university.

Four established areas of research about the education of novice researchers, also known as research training, are examined: 1) the pedagogy of supervision; 2) threshold concepts of PhD candidates; 3) the Researcher Skill Development Framework; and 4) research metaphors. From these fields of research, practical recommendations are extricated to articulate how higher education institutions can promote learner agency, according to heutagogical principles, within the candidate's doctoral journey.

During this chapter, researchers are viewed as learners and the purpose of the chapter is to explore how the agency of these learner-researchers can be recognised and promoted, in practical terms, within the tertiary education sector.

Introduction: Researcher development

Usually, novice researchers hone their research abilities within the bounds of educational institutions by engaging in informal mentoring programs, laboratory work, field work, formal training courses and university degrees. This chapter focuses on one particular research training trajectory – that of doctoral candidates facing the challenges of learning about and conducting research while being enrolled in doctoral degrees. Whilst they may begin their doctoral studies as recognised experts or experienced practitioners in their field of work, they typically report feeling like a novice at the beginning of their postgraduate studies. Depending on the discipline and the context of their work and study, their transformation from a novice to an experienced researcher may take a number of pathways.

Development of research skills through candidate-supervisor interactions

Doctoral candidates may develop their research knowledge and skills incidentally over time through interactions with their postgraduate supervisors. During these candidate-supervisor exchanges they typically develop an understanding

of how research works, often through the process of a cognitive apprenticeship style approach (Collins, Brown, & Holum, 1991) in which their supervisors model various research practices.

Research training programs and policies within universities

Doctoral candidates may engage in professional development (PD) activities and research training programs that are formally provided by the universities in which they are enrolled. These opportunities frequently take the form of on-campus workshops, mentoring programs and/or online modules. Typically, the content of these research training programs is pre-determined by “those in the know” (experienced researchers) whose goals are to promote the education of novice researchers, enabling them to effectively and efficiently complete their postgraduate research degrees. Such programs may be specifically designed to initiate postgraduate candidates into the world of research and academic writing. “How to” workshops may be offered to guide postgraduate students, for example, through the processes of conducting literature reviews, writing research proposals and following guidelines for ethical research.

As well as PD-type programs, many universities have established capacity-building policies that institutionally support higher degree research (HDR) candidates as they develop into experienced researchers. Again, these policies are usually written by expert researchers or experienced university personnel and do not typically incorporate input from novice researchers.

The role of learner agency in research training

While PD programs and institutional policies play a valuable role in promoting the development of experienced researchers, the novice researcher features more as a participant than an initiator of their own PD in these programs and policies. Few research training approaches acknowledge the novice researcher’s choice or learner agency. The self-determination of PhD candidates in their own trajectory of development may not even be acknowledged as an important determinant of their progress.

By considering the learner agency of the novice researcher, this chapter proposes a re-visioning of how a novice researcher could transition to becoming an experienced researcher. While not devaluing the research training processes adopted across the university sector, including the incidental and ongoing learning that takes place during supervisor-candidate interactions, this chapter suggests an alternative approach to supporting novice researchers in their learning trajectories: that which acknowledges the merits of self-determined learning approaches by allowing, encouraging and *daring* those engaged in research training to incorporate more learner choice into the research training landscape. By opting for less rigid boundaries on the design choices associated with the *who*, *what*, *where* and *how* of research training, this chapter proposes greater involvement of those at whom research training programs are targeted.

Purpose of this chapter

This chapter may be most relevant to those engaged in the supervision of postgraduate research candidates or educational designers who are responsible for developing research training and PD programs to support researcher development. Four key fields of educational research that relate to researcher education are analysed with a special emphasis on how the researchers leading these fields position the novice researcher as an active learner during their PhD journey. Aspects of researcher education that especially promote learner agency, or are specifically designed with heutagogical principles in mind, are highlighted with a view to extricating practical recommendations for postgraduate supervisors and designers of PD programs for novice researchers. Throughout this chapter, novice researchers are viewed as learners, the purpose of the chapter to explore how the agency of these learner-researchers can be recognised and promoted, in practical terms, within the tertiary education sector as they participate and progress through postgraduate research degrees.

The pedagogy of supervision

The first field of research considered in this chapter is that of the *pedagogy of supervision* (Bruce et al., 2009; Grant, 2005; Green & Lee, 1999). At the heart of this form of pedagogy is a particular form of teaching and learning that takes place across the PhD candidature during which an ongoing candidate-supervisor relationship develops. The learning-teaching interactions that occur between postgraduate supervisors and their PhD candidates are acknowledged as instrumental in the development of a novice researcher's capabilities. This form of teaching is often deemed successful when the candidate's learner agency is recognisably enacted at the point at which the HDR candidate becomes an independent researcher. This stage of their learning journey becomes noticeable, usually by their supervisor, as the researcher engages in various processes of self-determined learning and takes charge of their own research project.

The following practical recommendations are extracted from the last two decades of research associated with the pedagogy of supervision, with a special emphasis on heutagogical approaches that encourage the involvement of PhD candidates in their own development as researchers. To promote learner agency of their PhD candidates, postgraduate supervisors are encouraged to consider the following practical recommendations.

- **Topic choice and supervision approach.** As opposed to directing candidates to pre-determined research topics or offering candidates a selection of topics and supervision approaches from which to choose, negotiate choices of research topics and supervision methods with the candidate.
- **Personal learning preferences.** Invite input from the PhD candidate in the early stages of their degree about their personal learning preferences – especially in relation to how they engage with their supervisors and how they select research training opportunities.
- **Robust discussions.** Expect and encourage the candidate to engage in robust discussions with their supervisors about the candidate's research and writing decisions, noting that some of these discussions may end with an "agree to disagree" stance.
- **Communication style.** Flatten the supervisor-candidate hierarchy by communicating more frequently with the PhD candidate on a collegial level, rather than adopting a traditional student-teacher hierarchical communication style.
- **Candidate's leadership.** Accept the candidate's role of leadership, especially in the later stages of the candidature.

Learning thresholds of doctoral candidates

For many years, Margaret Kiley and Gina Wisker investigated the threshold concepts that PhD candidates develop as they work their way towards becoming experienced researchers. These threshold concepts, sometimes referred to as *learning thresholds* through which a candidate transitions, are described as "building blocks" (Kiley & Wisker, 2009, p. 432) that lead the candidate to a new level of learning. Once reached, the learner typically sees their subject and their own learning in a new light. Kiley refers to these points in the PhD journey as, "rites of passage" (2009, p. 293). From an HDR supervisor's point of view, it's important for supervisors to know about these threshold concepts so they can better assist their candidates to identify and *learn through* the process of achieving these higher levels of learning which may, in fact, present as periods of "stuckness" (Kiley, 2009, p. 302).

After interviewing a number of HDR supervisors and asking them questions such as "How do you identify when a student has crossed a threshold?", Kiley and Wisker detected a number of threshold concepts that doctoral students crossed or achieved when developing as researchers (2009). Their findings present six threshold concepts in researcher education described as, "major conceptual challenges for those learning to be researchers" (Kiley & Wisker, 2009, p. 439), including: argument; theorising; framework; knowledge creation; analysis and interpretation; and research paradigm. No doubt, many experienced researchers and postgraduate supervisors, as well as research candidates themselves, may recognise some of these stages as problematic for novice researchers.

Kiley and Wisker acknowledge the value of considering the threshold concepts of doctoral candidates from the perspective of the supervisor as well as the candidate. They also express their interest in investigating these threshold concepts further, from the student's point of view: "In addition, we are working on gaining insights from students as to

their experiences of crossing (or not) these different thresholds. Bringing together the understandings of students and supervisors will be critical in advancing this area of learning” (Kiley & Wisker, 2009, p. 440).

While the wisdom of experienced supervisors is no doubt eminently valuable when identifying the threshold concepts that research candidates achieve or *learn through*, the insight offered by the candidates about their own experiences, from a phenomenological perspective, is of potential value by providing an insider’s perspective to how researcher development transpires. The choices made by candidates during their PhDs and the informal and non-linear nature of much of their lifelong learning experiences align closely to heutagogical learning principles as outlined by Blaschke (2012) and Hase and Kenyon (2013) that acknowledge the value of nonlinear teaching and learning approaches.

The research conducted about the threshold concepts developed by novice researchers during their PhD candidature provide practical recommendations for both PhD supervisors and the candidates themselves.

- **Expect periods of difficulty.** By engaging in conversations about the points of difficulty or “stuckness” in a PhD candidate’s degree, such points of difficulty should be presented by supervisors as incidental, expected or typical of a PhD candidate’s experience.
- **Identify milestones.** Points in the PhD candidate’s progress (e.g., achievement of key threshold concepts of doctoral students) should be identified and celebrated as conceptual and practical milestones.
- **Engage with other candidates.** As well as making informed recommendations from their positions of experience, supervisors should encourage PhD candidates to co-mingle with other PhD candidates who have already or who are about to achieve doctoral threshold concepts (in the spirit of the cross-pollination of doctoral knowledge).
- **Training preferences.** Candidates should be encouraged to voice their preferences for research training topics by contacting the postgraduate studies departments of their universities or engaging in learning contracts with their supervisory team.

Researcher skill development framework

John Willison’s investigations, over many years, into the skills that researchers develop are the basis of his Researcher Skill Development (RSD) Framework (Willison, 2010a, 2010b), of which the skills of doctoral candidates feature. The RSD Framework is described as a way of articulating, “to students not only the research skills required, but also clarifying the resulting autonomy in their research-orientated learning” (Willison, Sabir, & Thomas, 2017, p. 430). Torres and Jansen (2016) emphasise the Framework’s capacity to define researcher skills, noting that it “articulates explicit, cyclical and incremental development of students’ research skills” (p. 26).

Willison’s Framework outlines the increasing level of autonomy gained as researchers become more experienced in a similar way that the theory of heutagogy aims to develop learners who are, “highly autonomous and self-determined” (Blaschke, 2012, p. 56). The current version of the Framework, known as RSD7 (Willison, 2018), includes seven levels of autonomy, from *Prescribed Research* through to *Bounded, Scaffolded, Self-initiated, Open, Adopted* and *Enlarging Research*. These autonomy levels specify how much choice and scope researchers exercise in initiating research topics and the degree of independence they enact when conducting research (Willison & Buisman-Pijlman, 2016). The Framework is built upon the expectation that researchers “may shuttle back and forth between higher prescription and greater scope ... rising and falling as conditions dictate, rather than hierarchical ... neither a high level of autonomy nor low is more valued” (Willison et al., 2017, p. 440). This recognition of the usefulness, at times, for the PhD candidate to move backwards in terms of autonomy for the purposes of taking direction from their supervisors, is seen as relevant in self-determined learning, described by Hase (2009) as, “extremely dynamic experience occurring in a world that was (and is) highly complex, non-linear and ever-changing” (p. 43).

Willison collaborated with many other researchers and educators in the application of his RSD Framework, often using it to inform the design of curricula for both undergraduate and coursework degrees (e.g., Willison & Buisman-Pijlman, 2016; Willison et al., 2017). In later years, he specifically explored the development of researchers’ levels of autonomy and has particularly taken note of students’ perceptions of their own research skills. Thus, the Framework is an example

of heutagogical theory in practice through its acknowledgement of the continuum of a researcher's learning that, "occurs when the learner is ready" (Hase, 2009, p. 44).

The following realisations, based on the research published on Willison's Research Skill Development Framework, offer practical recommendations for how this Framework may be used to encourage PhD students to take on increased levels of autonomy at key points of their development as researchers.

- **Degrees of autonomy.** The RSD Framework incorporates a "continuum of researcher autonomy" which, in practical terms, recognises that varied levels of autonomy are required by PhD students throughout their candidature, and that these levels of autonomy are more back-and-forth than hierarchical (Willison et al., 2017). Varied levels of autonomy are described across a researcher's development (Willison & Buisman-Pijlman, 2016) and PhD candidates are not expected to demonstrate high levels of autonomy as novice researchers in the early stages of their candidature.
- **Articulating research skills.** The RSD Framework can be used as a conversational basis between candidates and supervisors (Velautham & Picard, 2009) and as a way of articulating researcher skills (Torres & Jansen, 2016).
- **Skill relevance.** The ability of HDR candidates to identify their own research skills, as acquired through their PhD degree, is important because it enables them to communicate the relevance of their research skills to their current and future employers (Willison et al., 2017).

Metaphors used to describe research

Metaphors used to describe research are investigated for the purposes of providing insight into the conceptions of research held by PhD candidates and their supervisors, and novice and experienced researchers (e.g., Bills, 2004; McCulloch, 2013; Pitcher & Åkerlind, 2009). While some researchers have explored metaphors for research supervision (Bartlett & Mercer, 1999; Mackinnon, 2004; Vilkinas, 2002), others have focused on metaphors that describe the experience of the doctoral candidate or metaphors that describe the research conducted by the candidate. Discussions about research metaphors are recognised as a method of deepening candidate-supervisor interactions throughout a PhD student's candidature as well as a technique to help candidates understand the processes that take place during doctoral study. Hughes and Tight (2013) further distinguish between two types of metaphors used to describe a doctoral degree: metaphors based on *processes* (e.g., journey or route metaphors) and those that describe *products* (e.g., the work metaphor).

While discussions based on metaphors may act as a bridge between the ideas of the candidate and his or her supervisor/s, some metaphors distract from such connections by further reinforcing the power pecking order between the candidate and the supervisor/s and may undermine candidate autonomy. Furthermore, the role of learner agency, as a component of the PhD itself, is not always promoted during candidates' and supervisors' discussions of their respective conceptions of research. Bills' research about supervisors' conceptions of research identifies a problem in the way research is conceptualised because it constructs, "authoritative researcher identities" (Bills, 2004, p. 87), which reinforce the deficits that postgraduate candidates feel as researchers. Her conclusions also emphasise the importance of the role of reflective practice in any PD program.

Beyond the vision of the PhD as a landscape where research occurs or the way in which the results of a PhD contribute to knowledge, the actual experience of completing a PhD is also metaphorised. While the process of completing a doctoral degree is frequently described as a "journey", as acknowledged by Hughes and Tight (2013), McCulloch (2013) suggests the "quest" metaphor as an alternative, describing it as, "a cross-cultural basis for both staff and student development activities through which sense can be made of the research experience" (p. 55). He offers the quest metaphor due to its unpredictable and, sometimes, unexpected nature. This aspect of the PhD process resonates with heutagogical principles that acknowledge how learning does not necessarily occur in predictable, well-ordered, teacher-driven steps (Hase, 2009; Hase & Kenyon, 2013).

The following practical recommendations are offered for use by postgraduate supervisors and their candidates. They are drawn from published literature about postgraduate candidates' and post-doctoral researchers' conceptualisations of research, as expressed in metaphors.

- **Expectations.** Discussions about various metaphors for research can be used by supervisors to assess their candidate's understanding of research and, by candidates, to understand their supervisor's expectations of their research projects.
- **Concepts of research.** Research metaphors (e.g., as reported in the research of Bills, 2004; Pitcher & Åkerlind, 2009) are used to assist both postgraduate supervisors and their students to understand how the research of a PhD candidate is linked to the research described in university policies. Use of metaphors for the doctoral degree, in discussions between candidates and their supervisors, clarify the process of completing a PhD and express the value of the product of such a degree.
- **Stages of research.** Metaphors are used to assist candidates to understand the various stages of conducting research as part of a doctoral degree.
- University policies that describe the PhD process in a lock-step set of ordered milestones may require revision to incorporate less linear processes: such processes should be directed just as much by the novice researcher (i.e., the PhD candidate) as their postgraduate supervisors and the institution in which they are studying.

Conclusion

This chapter represents a set of practical recommendations for use by supervisors of PhD candidates and designers of research training programs for novice researchers. Four fields of research associated with research training and researcher development are consulted to establish recommended practices for promoting self-determined learning approaches for novice researchers within doctoral degrees. The practical recommendations extracted from these four fields of research range across issues associated with research autonomy, candidate-supervisor interaction and the conceptualisation of research and research processes.

A common thread runs throughout all recommendations: that of the value of input by the novice researcher into their own trajectory of development as a researcher. Underlying all of the practical applications put forward in this chapter is the theory of heutagogy, specifically focusing on the learner's agency as part of the process that novice researchers experience on their pathway to becoming experienced researchers. When the pedagogy of supervision is enacted in a way that recognises the advantages of transferring learning choices to novice researchers, both the candidate and the supervisor may benefit from flipping the tables of structured hierarchy that is often at the heart of traditional supervisor-candidate interactions.

As Blaschke and Hase (2016) explain, heutagogy offers the educator and the educated "a framework to think about learning in a revolutionary way" (p. 37). In the current days of COVID19 when there is much talk about flattening the curve, this chapter has put forward a set of reasons why flattening the traditional hierarchy of the supervisor-candidate relationship, on which many a doctoral degree is based, is a recommended way to promote heutagogical learning principles, especially those associated with choice and the promotion of learner autonomy.

In summary, this chapter offers the following key practical applications to institutions who are aiming to promote learner agency within HDR candidates' doctoral experiences. These recommendations are categorised according to the four established areas of research that were consulted in the preparation of this chapter.

Recommendations, extracted from pedagogy of supervision research

- **Topic choice and supervision approach:** Negotiate with the candidate, rather than dictate, choices of research topics and supervision methods.
- **Personal learning preferences:** Incorporate the candidate's personal learning preferences into supervisor-candidate interactions.

- **Robust discussions:** Expect and encourage robust supervisor-candidate discussions that incorporate points of agreement *and* disagreement, consensus not always being achievable.
- **Communication style:** Collegial-style communication is preferred supervisor-candidate interactions, rather than traditional student-teacher hierarchical communication.
- **Candidate's leadership:** Accept and encourage leadership from the candidate, especially in the later stages of the candidature.

Recommendations, extracted from threshold concepts research

- **Expect periods of difficulty:** Refer to points of difficulty or “stuckness” as incidental, expected and typical of the PhD experience.
- **Identify milestones:** Make an effort to celebrate conceptual and practical milestones in a PhD candidate's progress.
- **Engage with other candidates:** Encourage candidates to co-mingle with other candidates who may have already achieved key doctoral threshold concepts.
- **Training preferences:** Engage candidates in identifying areas of need in research training.

Recommendations, extracted from research about the Research Skill Development Framework

- **Degrees of autonomy:** Throughout a PhD degree varied levels of autonomy are required and these levels are not necessarily hierarchically staged throughout a candidature.
- **Articulating research skills:** The Research Skill Development Framework is a useful basis for articulating a candidate's skills as a researcher.
- **Skill relevance:** Candidates need to identify and articulate their own skills as researchers, especially when communicating with current and future employers.

Recommendations, extracted from research about the research metaphors

- **Expectations:** The use of research metaphors provide insight into a candidate's understanding of research and can assist in understanding supervisors' expectations of candidates.
- **Concepts of research:** The use of research metaphors in university policies can render these policies more accessible candidates.
- **Stages of research:** Metaphors assist candidates understand research stages.
- **Policy:** University policies should incorporate linear and non-linear PhD milestones. The development of policies should involve input from candidates and supervisors.

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Chapter 16

Transformative Teaching and Heutagogy

Val Margarit

Transformational Learning

Learner Empowerment

The future is unpredictable, and we need to prepare our students to be ready for it. To navigate such uncertainty, higher education institutions need to provide students with the knowledge, skills, attitudes, and values needed for success in life. These new challenges require higher education institutions to evaluate their teaching and learning practices and develop new ways to inspire, empower, and transform students' learning experiences – which requires enabling students to exercise agency over their learning choices. Teachers can support agency by recognizing students' individuality, abilities, and interests. Together, teachers and students can co-create personalized learning plans that will motivate and empower students to develop the skills they need to nurture their passions and pursue their goals.

Introduction

Universities need to develop curricula with their students' needs in mind and prepare them with skills they need that will allow them to thrive and continually adapt in a complex and rapidly changing world. This skill set consists of noncognitive, cognitive, and job-specific skills. Noncognitive skills such as teamwork, perseverance, motivation, critical thinking, creativity, communication, problem-solving and collaboration are critical to students' success in the classroom and the workplace (Brunello & Schlotter, 2010; Levin, 2012; World Economic Forum, 2016; Ehlers & Kellerman, 2019). Other characteristics needed for managing challenges of the 21st century also include mindsets (Dweck, 2008), and personal qualities (Duckworth & Yeager, 2015). Students are not empty vessels to be filled with knowledge, but rather, whole persons with dreams and aspirations and connections to their world. Educators have the unique opportunity to create transformative learning environments in which students are at the centre of the learning process.

In this chapter, I share personal teaching practices and reflections on how I use heutagogical principles to unleash the power of learner agency and prepare students to thrive in an unpredictable world. I will also share student reflections on the importance of self-determined learning.

Principles of teaching and learning

The principles I use are based on the notion of *transformational learning*, which is defined as a process of questioning old assumptions, values, perspectives, and beliefs and making them more open and accessible (Mezirow, 2000). Knowing our students and their world is the first step to designing a transformative learning experience for all.

The following teaching and learning principles allow me to empower students to believe in their ability to achieve their highest potential. In this section, I will describe why each principle is critical to developing learner agency:

- Knowing your students
- Knowing how your students learn
- Respecting diverse backgrounds, talents, and ways of learning
- Aligning learning objectives, assessments, and instructional activities
- Communicating student-driven expectations and objectives
- Offering formative feedback
- Ongoing learning and reflection

Knowing your students

Knowing my students involves developing a student profile to identify their motivations, aspirations, and challenges. I gather information from enrolment data and from the students themselves about age, marital status, socioeconomic background, race, and ethnicity, and native versus international. A week or so before the first class, I send out an email or a video to students with information about the course, my background, my teaching methods, skills they'll learn, how the course relates to their life, and how enthusiastic and passionate I am about teaching and working with them. At this time, I also introduce the concept of "first impressions" and the belief that we only have about seven seconds to make a first impression (Dovico, 2016; Robles, 2012).

I then begin developing my course with the student in mind. Various sections of the course are designed together with my students during our first class. By doing this, I develop trust, respect, and interest in all of my students, which motivates them to commit to their learning goals and is important to success (Cornelius-White, 2007; Koca, 2016).

A first-class icebreaker allows students to introduce themselves to others and practice the first impression experience in real time. Then we discuss how the perception of others aligns with their perception of themselves. At this time, we also discuss the importance of communication, values, cultures, and perceptions. This principle is useful in developing learner agency as students become motivated and committed to their learning because it's relevant to their own needs and goals.

Know how students learn

Metacognition is the process of thinking about one's own thinking or awareness and management of one's own thoughts (Flavell, 1979; Kuhn & Dean, 2004). One way in which students achieve metacognitive awareness is by practicing mindfulness meditation, which has been defined as the awareness that emerges from paying attention on purpose in a non-judgmental way (Kabat-Zinn, 2003). I also use mindfulness to help students become aware of their strengths and weaknesses, reflect on their thinking, and control their stress and anxiety.

People are born learners and have a need for agency, autonomy, and self-determination (Hase, 2016; Spence, 2001). However, understanding how one learns and thinks about one's own learning can help in becoming a more accomplished learner. In particular, metacognition can assist in recognising barriers to learning and pave the way to removing them. Teacher-centric learning that relies more on pedagogy can take agency and be a barrier to learning (Brandt, 2013) whereas more learner-centred approaches enable agency (see Chapter 1).

Respecting diverse backgrounds, talents and ways of learning

Students bring to the classroom varied cultural backgrounds, knowledge, skills, and attitudes that impact how they learn, their self-efficacy for learning, and their learner agency. I try to design my learning processes to accommodate all types of learners from all backgrounds. One heutagogical approach that I use is that students select learning activities that fit the way they learn best. Thus, the learner is an active partner and has agency in determining the learning process with the teacher as a guide in recognition of individuality. In addition, we want to ensure that together we create a safe learning environment where everyone thrives by being aware of our individual differences (Velliari, 2016).

Aligning learning objectives, assessments, and instructional activities

Providing students with experiential and authentic learning activities allows students to become motivated to discover and construct knowledge and to develop a greater appreciation for the subject matter and longer content retention. Role playing and service learning are two authentic activities that students enjoy as they interact with other students and apply their own knowledge to real world situations (Coker, Heiser, Taylor, & Book, 2017; Ma, 2020).

Communicating expectations and objectives

Teachers and students alike have personal expectations (Bacerra, 2012; Rubie-Davies, 2012). Awareness and sharing of these expectations are important in the learning partnership. This is especially true for my international students and first-generation students whose educational experiences may be different to mine and each other's.

Offering diverse methods of feedback

Feedback is important to learning and growth (Voinea, 2018). Formative feedback helps promote learner agency. It enables students to be in control of and to reflect on their learning, change behaviour where needed, and to develop persistence and resilience to finishing the work: skills they need to thrive in the real world. Feedback as assessment can be used as part of the learning process rather than an end in itself, with the learner as a partner (Hase and Kenyon, 2000; Hase, 2011).

Ongoing learning and reflection

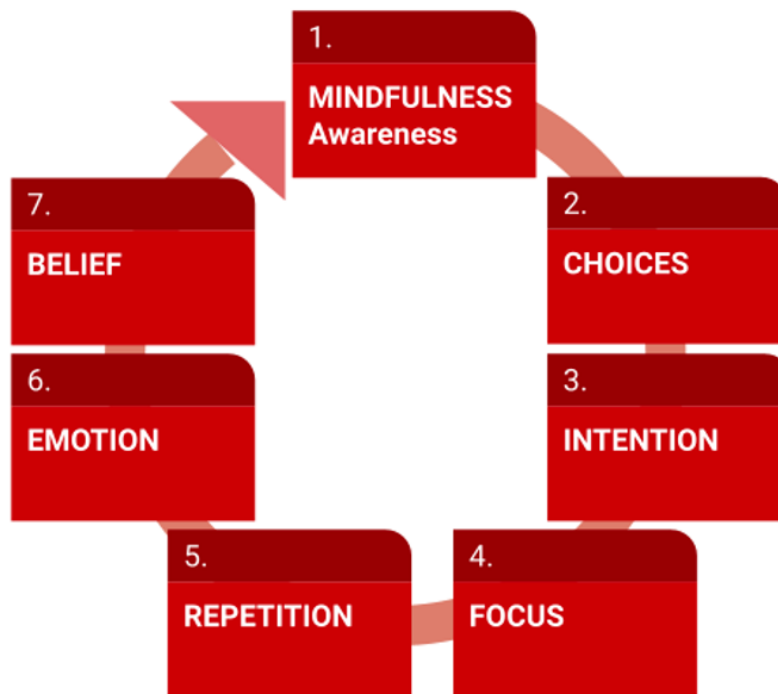
Reflective practice is intended to promote critical thinking. Students reflect on their learning and how it applies to the real world. By doing so, students become empowered to self-correct habits of mind as they may become evident during the reflection process. Reflective learning is equally important to teachers. As a reflective educator practitioner, I use evidence to continually evaluate and adapt to meet the needs of each student and of my own.

Strategies

Next, I will share seven strategies I use to help my students become the designers of their own learning journeys. These strategies are summarised in Figure 1 below.

Figure 1

Seven Strategies



TLM - Transformative Learning Method by Val Margarit

Step 1: Mindfulness

Students participating in mindfulness practice show a significant improvement in cognitive skills, social skills, and noncognitive skills (Bostic et al, 2015; Klingbeil et al, 2017; Campbell, 2013). Moreover, mindfulness helps with awareness, stress and anxiety decrease, and enhances resilience and self-control. Self-control empowers students to regulate their emotional, cognitive flexibility and to increase attention and focus on learning and completing a task (Eberth & Sedlmeier, 2012; Goyal Singh, et al, 2014).

Class application. Introducing the concept of mindfulness, I share my personal experience with it and include a video explaining its benefits. In groups, students research the topic further and present the findings to class. Each class begins with a few minutes of mindfulness meditation, then we set an intention for class, and then finish the class with self-reflection journaling. These principles are supported by various theories including heutagogy, self-determined, and humanistic theories (Hase & Kenyon, 2000; Blaschke, 2012) Moreover, journaling about learning experience helps in growth development, critical thinking, focus, and clarity. Through the assignment, students have felt a sense of empowerment and control over their lives.

Student C reflected:

I had an amazing experience in this class, it encouraged me to meditate every day. Especially during this pandemic, I started doing spiritual meditation which helped release and settle my thoughts and emotions, relaxes my nervous system, and helps my body unwind from stress also helped to let go of the past and sink in peace which helped me realize who you really are.

Step 2. Choice

Students become engaged in their learning if they perceive that they have choices, which creates a sense of autonomy, and competence. Students learn about conscious choices that are directly related to their own interests, which

increases student success (Blaschke and Hase, 2015). It is always my goal to empower all students to take action and to be in charge of their learning, of making conscious choices, and reflecting on their progress, adjusting and adapting.

Class application. Create a vision for the course with your students. Have a conversation about learning outcomes, why they are important, and how to achieve them. Ask students about the skills they need to thrive in the real world and then point out how the course assignment choices will help them learn and practice those skills. My philosophy is, if it's not applicable and useful in the real world then it's not worth teaching it'. Giving choices and autonomy over their learning seems to help students unleash their learner agency.

Step 3: Intention

Choice is empowering and requires students to be intentional. I take a co-leader or facilitator role in this learning journey, ready to support, explain, guide, motivate, empower, and inspire students to stay focused on their goals and develop the skills necessary to achieve them (Hase, 2017). Self-control over learning enables learner agency.

Class application. I work with students to identify what we need to learn, why, how, and what methods of assessment we should use. Each class starts with identifying objectives for the session. Students are aware, engaged, motivated, responsible and accountable in this process because they realize it is about them and their future, and their success is relative to the effort they put in. The primary questions are: what are we going to learn today, how, and why?

Step 4: Focus

Mindfulness concerns being present and observing one's own thoughts. Focus involves paying attention and training the mind to focus on an intention or goal and to ignore distractions. So, training the mind to focus is one of the most important skills students need to achieve success in school and at work. I often ask students "who will you be at the end of the class?" Students learn about the setting, planning, measuring and completing goals. As student R said:

Four weeks ago, I was sluggish and unmotivated. Now I feel empowered and have a more peaceful mind because I've taken the time to focus on controlling what I can control and not feeling that I have to change or fix everything. I am most proud of relaxing my mind. I had a lot of anxiety and chose to ignore it and it only got worse. I am proud to say that I don't have anxiety as I did before. The skills I learned in this class with Professor Val will help me be successful in life: Meditating, Confidence, Positive thinking, Resilience, Focus. Professor Val has taught me how to control and train the mind to focus on goals I want to accomplish and not worry about things I cannot control. I feel empowered. It's a great feeling.

Class application. We begin by having a conversation about why it's important to train the mind and the brain to focus on what we want to achieve. I use the example of smart phones, addiction to smartphones is related to psychological and physiological health issues (De-Sola Gutiérrez, Rodríguez de Fonseca, and Rubio, 2016; Boumosleh & Jaalouk, 2017). We discuss stress, anxiety, depression, and inability to control emotions, all because of the inability to stay away from the phone and focus on the goal at hand. We agreed to collect all of our phones at the beginning of class and to take a tech break every 30 minutes for 5 minutes. I teach my students to focus all their attention on breathing and to count to ten. Every time the mind wanders (check email, check phone, where is my key?), they have to start over again until they are able to count to ten. I share several focus and productivity apps such as Stay Focused, a productivity extension for Google Chrome that helps us stay 'focused' on our work; TimeStats and RescueTime shows where we've been online and how we spend our time.

Step 5. Repetition

Do you remember a moment when you scored a perfect 10 on a test, learned to drive, or passed a difficult exam? Our performance improves when we practice over and over especially at various intervals of time (Kang, 2016). Repetition is of vital importance to the learning process. It is through repetition that we make the unfamiliar familiar. For instance, reading books on how to drive a car, or public speaking, time management, diets, mathematics, running, or any other academic or physical skills will not teach students how to do any of these skills successfully unless they take action

and begin to practice them. It is through repetition that they learn and improve performing any skills. As the old adage reminds us, 'practice makes it perfect.'

Class application. I tell students that the secret to successful learning is repetition and perseverance. To learn a new skill or habit, we need to repeat the behaviour until it becomes natural. This is achieved by using different learning methods to cover the same skill such as discovery learning, flipped classroom technique, and experiential learning and assessment. Here are several ways I use repetition to make sure students remember what they've learned and continue to practice the skills and attitudes they need in the real world:

1. At the beginning of class, we recall what we covered in the previous class. Each student shares at least three 'aha moments' or 'takeaway points.'
2. At the end of each class, students write in their reflection journals about how they spent their time, what they learned, and how it's connected to their learning objectives, academic goals, and life in general.
3. Every Friday, we have a chapter review. In groups, students discuss their weekly learning and growth. Then one student per group shares her or his combined learning.
4. Students have a weekly guided journal assignment that asks to answer open-ended questions about their learning experience, suggestions for improvement, and what as a class we should do differently the following week in order to improve and thrive.
5. Throughout the semester, students are asked to recall what skills they have been cultivating and how they assess their performance. These skills are first discussed at the beginning of the course to increase awareness of the skills they need in school, work, and life.

As student J reflected:

I feel empowered and educated because being able to talk about how socialization is important in our society makes me learn more about human behaviour and in the future became a much better global citizen. For example, it's important to socialize people from a young age to learn skills like respect, teamwork, and being able to communicate with others. It is through practice and repetition that I was able to polish these skills, which would help me achieve success in life.

Step 6: Emotion

Students will commit to projects that are meaningful and are related to their own lives. Creating positive emotion by design may seem difficult at first. However, with practice, it will become easier, and they learn to control how they feel. For example, many students lack self-confidence, self-esteem, and time management skills, all of which they need to survive and thrive in the real world. Practicing mindfulness teaches them about why they feel as they do and how to overcome and replace negative habits of mind with positive thoughts. This exercise emphasises the theory of self-determined learning by having students take agency in controlling their choices and decisions and to feel a sense of autonomy and confidence. The goals students choose to focus on are meaningful, so there is an emotional connection which increases their self-belief about their ability to perform a task that they perceive as difficult or impossible to do.

Class application. Ask students to share their passions, dreams and goals, then together co-design activities and assignments that they will commit to taking on. Next help them plan, measure, and adjust their goals and create small milestones to show their progress and celebrate success. This step will increase confidence, courage, and self-efficacy.

Step 7: Belief and reflection

The benefits of reflecting on one's work are transformational and widely known (Isaacson & Fujita, 2006). For example, at the beginning of class, students write in their journals by redirecting the mind to focus intentionally on the class's goals, and at the end of the class students journal about what they learned, new ideas, and any questions they have. According to Schön (1983), this reflective practice supports students in becoming lifelong learners, as "when a practitioner becomes a researcher into his practice, he engages in a continuing process of self-education" (p. 299).

Class application. Challenging learning activities and critical thinking assignments help build awareness, self-efficacy, courage, confidence, and communication skills, as well as habits of mind, attitudes, and behaviours necessary to reach their potential. As we conclude the course, students have a choice whether to share their journaling experience and personal growth as part of their final project. Most of the students do so since they are proud of their transformation and eager to share with everyone.

As student B reflected:

Four weeks ago, I remember being so shy I would not like to talk in front of everyone because I would think that whatever I might say or ask might be dumb, but Professor Val, made me feel otherwise. The second day of class I came in wearing heels and that was the first time I would come to class wearing heels and you made me start feeling confident enough to do that. The first skill that I've learned is self-control. I will need this in everyday life because instead of talking back or always trying to be right sometimes it is always good to be mature and have self-control. The second skill I've learned is critical thinking. This skill will help me achieve things in life because instead of thinking quickly I can take the time to examine and think deeper about things in the near future. The last skill I've learned is being strong-minded. This will help me be successful in life because I will not let anyone influence me the way that I feel or think.

Conclusion

Educators have a unique opportunity to design learning environments that prepare people for a future requiring a diverse range of student abilities and needs. Carefully designed assignments encourage students to expand their awareness, to control their choices, and to be responsible for their learning outcomes – to have agency over their learning. Educators can implement diverse learning principles and methods that align with students' interests and motivation and challenge students to question cultural assumptions and beliefs about their ability and hidden potential. Educators must be knowledgeable of the brain's neuroplasticity and its effects on learning and how to use it to help students reprogram old beliefs with new ones that support growth and achievement. Our unpredictable world needs proactive, self-directed people with the skills to survive, adjust, and thrive in diverse environments.

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Chapter 17

How Can We Green Our Learning?

Fred Garnett

Heutagogy

Greening

Informal Learning

cosmologies

learning agency

governance

curricula

Libraries

In 2019, Greta Thunberg became globally famous demanding that climate change be taken seriously with her #FridaysforFuture school strike. As a green activist, I welcomed her call, choosing to make World Heutagogy Day 2019 about "How Do We Green Our Learning?" I ran a series of weekly green learning workshops at New Cross Learning. With my heutagogy hat on, I saw Ms Thunberg's demand as a wish that her chosen path of self-determined learning should be around climate change. I knew that schools, institutions of compulsory education acting in loco parentis, would not voluntarily change so I decided to review how we might green the provision of mainstream education. This chapter draws together reflections from my green blog (Garnett, 2019a) concerning how this might be addressed. Progressively we need to "green" many aspects of education such as reading, libraries, curricula, research and, crucially for compulsory education, and governance. My wish was to provide Greta Thunberg with a route map that enabled educational institutions to design learning agency into their offer. My view was that if I could discover how we might "green our learning" that would also provide a guide whereby we could design in learning agency and heutagogy across the curriculum.

Greening our Learning

For World Heutagogy Day in 2019, a day chosen to celebrate the publication of self-determined learning (Hase & Kenyon, 2013), I decided to pose the question, "How Can We Green Our Learning?" (Garnett, 2019c). This was a direct response to Greta Thunberg's School Climate Strike and the almost universal pick-up by school children around the world around the concept of Fridays for Future. I saw this as expressing not only as protest but also as a desire for self-determined learning agency around climate change, a critical subject that was not on the school curriculum but which many schoolchildren found the most pressing issue of their times – as do I.

As protest, Greta Thunberg was articulating the desire that national politicians follow the international scientific consensus, repeatedly expressed at the Conference of the Parties (COP) of the UN Framework for Climate Change Convention and formally agreed at the Paris COP in 2015. The desire was that we slow down global warming by acting on agreed policy protocols, which could easily have been adopted by national governments, but which have mostly been ignored by them in practice. I personally worked on a number of green projects as part of Local Agenda 21 with the London Borough of Lewisham over twenty years ago, such as computer recycling, waste reduction, green management, affordable warmth, urban ecology and environmental education, and the green practices we introduced then have

largely been forgotten. No British government has ever seriously used its power to prioritise green issues, nor have local authorities retained memories of their own green practice. Being green is mostly seen as an optional "fun" pastime, or perhaps a lifestyle choice affecting the odd consumer purchase, but not a critical political issue. Green practices are most certainly not seen as an educational issue.

Having been ignored, like all greens, for over thirty years, I thought there was suddenly more potential for real change in 2019 coming from our schoolchildrens' implicit call for agency in their learning concerning green issues. So, I started looking at how self-determined learning about the environment could be supported on Friday afternoons, along with two green friends and fellow educators: Tony Wheeler, formerly a director of research at Goldsmiths College who has built a green zero-waste home, and Bridget McKenzie who set up both the Learning Planet and Climate Museum UK projects. I was convinced that schools would NOT change their curricula to meet the interests of their learners or, more precisely, their subject pupils. Indeed, the then British education secretary of state Damian Hinds said, in 2019, that climate change had been addressed, so there was no need for any change in education (DfE, 2019). As current education secretary Gavin Williamson also said in *The Guardian* in 2020, there is no need to change educational practice in the UK following the Coronavirus pandemic, it would seem that UK educational policy, in light of pressing and critical global issues, remains the big "institutional no" as Jeff Bezos described typical organisational responses to necessary change (Stone, 2013).

Seven problems to address if we want to "Green Our Learning"

Setting up an impromptu project to help support learner agency around "how do we green our learning?", slowly revealed to me, over the summer of 2019, several underlying problems with educational provision. These are problems which we will need to address if we are to make heutagogy part of core educational practice.

These issues can be listed as:

1. [Green My Library](#)
2. [Green My Reading](#)
3. [Green My Curriculum](#) (or teaching green)
4. [Green My Institution](#)
5. [Green My Governance](#)
6. [Green My Research](#)

I didn't initially realise that addressing how we might green our learning raised all these issues. They incrementally revealed themselves over the summer of 2019, whilst I was running the weekly Green My Learning workshops with New Cross Learning. This is a volunteer-run library which had been closed by the UK government when they withdrew from supporting public libraries in the UK. I've blogged about each issue more fully on my green blog Third Placed (Garnett, 2019a). However, I've subsequently realised that the very same set of issues, or barriers, also need to be overcome if we are to introduce heutagogy into formal educational practice in the compulsory education sector. So, I'm writing this with the double perspective of how we green our learning and how we can systemically introduce heutagogy into education.

How do we green our learning?

When the education system itself is not green, it is not a simple matter to solve the problem of how to green our learning. I'm writing this because I spent many years both lecturing at Lewisham College and greening education practically. I assumed that I had enough practical teaching experience to draw upon because I had taught a course on the Social Impact of Technology, which included the Environmental Impact of Technology. So, I thought that creating a fresh opportunity to learn about environmental issues would be relatively simple. However, in order to be free to teach about the environment within the formal education system I had to solve a number of practical educational problems including:

1. writing a curriculum proposal to allow the study of green issues,
2. developing a process of teaching about green issues,
3. creating, recommending and buying green learning resources, and
4. making a green topic both interesting to study and interesting to write up as a research assignment.

However, the earlier experience of setting up green learning opportunities within the formal education system didn't automatically translate into knowledge about how to create a voluntary, informal learning process in 2019. We don't learn in a vacuum. As Luckin (2010) has shown in *Re-designing Learning Contexts*, we need a relevant "ecology of resources" as part of any learning environment. I quickly discovered that the everyday ecology of resources that we might draw upon first, our local libraries, are themselves shaped by formal curriculum-driven education; New Cross Learning had no green books.

Informal green learning (Green my library)

I decided to examine how Bridget, Tony, and myself could support the Friday afternoon climate strikes by offering to be available at various locations to help green the learning of any school child on strike (subject to various safeguarding issues). As a consequence, I personally decided to work both with New Cross Learning, a local library in New Cross, as well as the nearby community coffee shop The Hill Station at the top of Telegraph Hill, both in London, which helps organise and host an annual community festival.

Every Thursday morning during the summer of 2019, I ran a green learning drop-in session with David Holloway, who has a WikiQuals open learning project called "Learning Without Barriers" (Holloway, 2018). I also started to look at how to provide a support centre for school children on climate strike. Trying to create a neighbourhood support centre for green learning revealed not only the critical set of issues that I will discuss here, but also revealed just how far away our education system is from having any green consciousness about itself, and how hard it is to identify what "green learning" is in practice.

Since there were few green books, I decided to act to green New Cross Learning by donating books every week I was there, such as *Autogeddon* by Heathcote Williams (1991) and *The Revenge of Gaia* by James Lovelock (2006). I also bought and donated two copies of Greta Thunberg's book, *No One Is Too Small to Make a Difference* (Thunberg, 2019), one of which was then stolen (perhaps due to the lack of access to any green resources). It also turned out that you couldn't simply donate books to a library in London but they had to go to a central library first to be recorded and perhaps approved.

This was parallel to what Bridget McKenzie (2019) was curating with her Climate Museum UK, where she was collecting objects related to the climate emergency, which then became a green resources hub. I was also hoping that a green book club could meet regularly in order to discuss green ideas further. These resource-based initiatives at the local library were not too successful. Social media was full of hashtags proclaiming a variety of green interests and much righteous anger, such as the spectacular Extinction Rebellion, but the real world was lacking practical initiatives on the ground that might help green our learning. Some young people did run an alternative COP26 online, the Mock COP (2020), during the Covid-19 pandemic, whose motto is "we spoke, now you act".

Green my reading

It was the lack of response in 2019 that caused me to reflect on how I had personally begun to green my learning. Unsurprisingly, because I had initially discovered agency as a learner by voraciously reading books that I chose for myself (see my other chapter), greening my own learning came from first discovering my own learning agency. I had learnt to follow my interests and so create my own folksonomy of learning by letting my curiosity reveal what I was interested in. Agency also requires choice, but more than that, agency further requires a wide range of possibilities to help broaden those possible choices. As I saw at the small local library that I had based myself in, choosing to read

green books was not an option. However, despite failing to #GreenMyLibrary I did manage to #GreenMyBookshelf as one bookshelf was opened up to store the green resources I had donated.

Whilst the content with which I personally managed to “green my learning” mostly came from books, there was also the contextual factor of nature itself, which I describe as being that “there’s a lightness on the edge of town, just walk into it” – as Peter Wohlleben (2016) reveals in *The Hidden Life of Trees*, nature is always talking amongst itself

Learning beyond the classroom

Most of my adolescent self-determined learning came from listening to music, choosing to watch films at the cinema (we had no TV), chatting with friends and, most importantly, “going to play outside” with no pre-determined agenda or rules, unless we made them up ourselves. I grew up in the 1950s and 1960s, which was an age of relatively few cars and not much television, from which my untrammelled curiosity benefitted massively. Perhaps not as much as the nature poet John Clare (2020), writing just before the Individual Revolution in the UK, but I was learning from Nature.

Green my resources

As a developing green, I learnt early on that I had to buy additional resources that fed my interests and thereby broaden my learning, unlike in the taxonomically-limited education system which is concerned to keep our interests constrained by the subject-curriculum and relevant resources are located in the library. Luckin (2010), however, defines resources as “the cognitive, affective and physical capacities and capabilities of a learner” (p 117), arguably describing how we learn “beyond the classroom” or in the “surrounding environment” of learning as she puts it. My understanding as a green learner was broadened and deepened by the resources I discovered by following where my interests took me, not because a forthcoming exam demanded it. In the case of exams, the cramming of information to be regurgitated under pressure shortly afterwards is probably the best way to make sure that you will forget it by the following year.

Green my institution

In 1990, I completed a Masters degree at City University with a research thesis on the Environmental Impact of Computing, which was framed by the question “Is there a Green IT strategy?”. I researched how to both green technology use and also how to green the institution. I introduced what my research had taught me, namely eco-management, recycling, and green awareness through an annual “Green Week” through the development of green policies at Lewisham College where I worked, and where I was chair of the Green Committee, alongside developing various green partnerships with the London Borough of Lewisham. This resulted in a New Deal for the Environment grant from the UK government for the Borough of Lewisham in 1998 and the creation of the Creekside Environmental Education Centre, which was the only building in London that met IOC Sustainable Development standards at the time and so was included in the successful London 2012 Olympic bid.

Green my governance.

These local successes apart, the single most important factor in Greening My Learning was to introduce a Green Governor at Lewisham College: certainly a first in the FE College sector in the UK. This meant that ALL college policies were reviewed by an environmental expert, Professor Shirley Ali Khan, co-founder of Forum for the Future. Without top-level strategic review of all college policies, everything else is piecemeal and ad-hoc. Adopting an eco-management quality standards approach also meant that the college had to publish its environmental performance every year for public scrutiny.

Green my curriculum or teaching green

I did this for many years, is not easy however. Currently, the teacher has to write the course submission and take it through a curriculum approval process first. Most teachers can't be bothered, or perhaps find the overhead to getting this done too onerous, with too many inspection and quality assurance barriers in the way. Luckily, I had started teaching in the USA where curriculum development is a rigorous, quality-controlled, but universal process undertaken every semester, so I was used to writing my own curriculum.

As I developed my approach to teaching, which I called "brokering learning" (Jennings, 2010), I wrote the environmental impact of technology into my Social Impact of Computing course – and so I learnt how to teach green. I eventually found that you only needed to teach about the Product Lifecycle Analysis of any product to understand its environmental impact. Doing this with plastic would solve the current single-use plastic problem, but this is not talked about. As I suggest in the Learning is Changing video (Garnett, 2011a) we must also learn to recognise the original thinking of learners and their heutagogical practices, so that they feel free to pursue their interests.

Green my research

Greta Thunberg has called for schools to change their curriculum, that we should listen to the science and that environmental scientists will tell us how to save the world – like green superheroes perhaps? Whilst I agree that governments should accept the IPCC report and act on Climate Change (United Nations, 2016), I don't think that "green research" should solely be the province of "environmental scientists", as we need a more holistic approach.

CoPIRG is one of the greenest research organisations in the world, in that environmental issues are on their research agenda, and it is a Public Interest Research Group not an academic research group, with a subject-discipline interest. It is also based in Boulder, Colorado, which boasts that it is the world's greenest town. Certainly, this is true in terms of by-laws and its self-imposed rules it is (City of Boulder, 2013). I was a Governor at CoPIRG, and I think we need to develop a new socially accountable form of research group (like the PIRGs). As we say in the learner-generated contexts research group, with whom I have made the most use of heutagogy, "context is queen" a theme I have used throughout my work since 2002. We don't think that "content is king," and this tension between the framing importance to our thinking of context and the didactic limitations of educational content reflect a critical issue here to me. I would argue that we learn from context above all, but undoubtedly, we learn best about nature by being in nature rather than in institutions. Going inside to learn about what is outside is drastically limiting to the range of ways in which we might learn. Going outside into nature, like the Outdoor Owls do, is the best way to learn about nature. By learning about nature within the context of nature we also might gain the deeper understanding that "context is queen".

Designing agency into green learning

The separate issues addressed here were the detailed practical issues I discovered that we needed to address last year if we were to green our learning institutionally. However, on reflection, I now think that the two critical issues in creating a Green Heutagogy are to be able to "Green My Thinking" and to "Green My Institution" so that green learning has a supportive green frame. If the educational institution you are trapped in is only concerned with high-stakes assessment successes, then you will be tested on a core checklist of facts from an exceptionally narrow range of acceptable subjects: the canonical core curriculum of compulsory education. At the moment, we don't think green, and we don't study in green institutions.

However, this isn't the place to discuss the deeper question of the nature of knowledge and how we validate and substantiate the epistemologies by which we think. That is a broader issue I looked at in "Putting Context into Knowledge" (Garnett, 2011b). However there is a substantive issue to discuss about "How Do We Green Our Thinking" which I did look at for World Heutagogy Day. If you follow the chronology of my deepening awareness concerning green issues as indicated in the Green My Learning post (Garnett, 2019b), then I didn't start to "think green" until after I left

school. This was because my pedagogically-driven schooldays filled up my thinking time, and I spent my "free time" finding joyful release from the mental RSI of repetitive school injuries, in the playful forms of popular culture, mostly pop music, football, and cricket.

As a town dweller, my context was urban, and my thoughts remained within my city boundaries. However, precisely because I lived on the edge of town – Harrogate in Yorkshire by the River Nidd – I realised that "there's a lightness on the edge of town," and I walked into it. From then on, I also began to learn from the natural context in which I was living, not just the urban offerings, and the educational slops I had been force-fed with. I had not worked out how to think for myself aged 18 but somehow, I did discover in 1969, that half the world away in Utah there was a Native American magazine called *Many Smokes* (which ran from 1969 to 1984) and so I subscribed to it by post. Maybe, because George Harrison had promoted meditation and the values of Indian culture, I had become intrigued by cosmologies beyond the subject orrery of my grammar school. It seemed to me that *Many Smokes* was largely about cosmologies, and I realised that I had no idea what I personally believed in, as opposed to what I had been told to believe in.

It seemed that The Beatles had gone through a similar process after the death of their manager in 1967. Following the unprecedented global success of their album *Sgt. Peppers*, they seemed to realise that they had been working to satisfy the values of others whilst not having a clue of their own values. Their trip to Rishikesh India in 1968 (they also considered buying a Greek island and living as a commune) meant that they abandoned their work commitments, whilst various companies tried to dictate what work they should be doing. Their next album, the so-called *White Album* was actually entitled, quite simply, *The Beatles*, which I've long taken to mean that they had finally come to know who they were; they chose to define themselves. For a short time in 1968, The Beatles had stepped out of the endlessly repeating structures of the music industry, namely, record, produce, sell, and tour. Instead, for a short time, they choose to do what they were interested in. They expressed their personal agency. Similarly, my green learning occurred when I could step outside of the endlessly repeating examination structures of formal education.

Many Smokes introduced me to the notion of green thinking by way of various cosmologies that inculcated both an ecological spirituality and planet-centric thinking. We get neither of these from the current scientific notion of environmental sustainability that COP and their advisory scientists, and even Greta Thunberg, are currently pursuing. They still seem to believe that we can have our planet and eat it. Once I'd started to think green, by reading "green," engaging with nature, and moving beyond solely rational thinking, I became capable of pursuing green actions in the everyday world.

At the moment, Fridays for Future is asking that others act green on their behalf. Given that the COP policy process promises exactly that, namely to create a green world for us, then perhaps it is a reasonable demand from young people – still trapped in compulsory education and lacking positive agency in their learning (just the negative agency of refusing to accept the norms imposed on them) – to ask politicians to solve the problems of the Anthropocene just by listening to scientists.

Developing positive green agency in oneself is perhaps harder than developing a learning agency, as we spend most of our childhood in schools and are intimately connected to the educational places that tempt us to learn as we are directed to, whilst restricting our agency. We are framed educationally in such a way that it is possible to glimpse what learning could be if really diverse choices were offered to us, rather than the occasional optional choice between which topic to study whilst on a pre-determined course (as it is in the UK).

Green my agency

So, on reflection, in trying to develop informal green learning opportunities for young school children to engage with on Friday afternoons, I also slowly discovered the multiple institutional barriers that exist to block any broader curriculum changes within the compulsory education system. We can't green our learning because the education system is constitutionally opposed to the concept of "my learning", that is the self-determined learning agency that we call heutagogy.

The several barriers described here are essentially the same barriers we need to traverse in order to “green learning” and introduce heutagogy as mainstream educational practice. These are, to highlight three critical points, firstly the “green governance” of educational institutions; secondly a greening of learning resources (which are shockingly and surprisingly missing from local libraries); and perhaps most significantly, the co-creation of learning processes as a shared endeavour both within and beyond the classroom by both teachers and learners. Similarly, for heutagogy to be adopted in education, institutional governance needs to be concerned with developing learning agency, and a broad ecology of resources needs to be available that are not just exam-related textbooks. Perhaps, most significantly, a school-level co-creation of learning processes is necessary, such as those adopted by Vijaya Bhanu Kote in her “heutagogy for primary children” (whom she calls “heutagogs”) project in Andhra Pradesh (Kote, 2020) – and needs to be introduced and celebrated.

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Chapter 18

Reflections of Heutagogy and Learner Agency

Chris Kenyon

Experience

Feedback

Heutagogy

reflections

This chapter consists of some of the feedback I have collected from my students and other teachers over 30 years as an educator of their experience of agentic learning and heutagogy. The comments are not categorised in any particular way and are left for the reader to draw their own conclusions. In some respects what you will read are a comment on an educational life that has been focused on learner agency.

Experience is, for me, the highest authority. The touchstone of validity is my own experience. No other person's ideas, and none of my own ideas, are as authoritative as my experience (Rogers, 1961).

Introduction

Back in 2000 Stewart Hase and I (Hase and Kenyon, 2000) coined the word Heutagogy when we were applying a radically different approach to learning, specifically in the context of postgraduate education. Since then, the approach has attracted much favourable support, and some criticism, around the world. What is it that captures the imagination and enthusiasm of thousands of people? Is it the theory, its ramifications for learning, and its related implementation steps?

Perhaps the main reason why heutagogy is receiving so much positive attention is because it seems to work, as can be seen from the comments below and the evidence described in this book. Learners in many countries, in private and public organisations, in schools, at work, in vocational education and training and universities are enthusiastic about their learning experiences. They seem to learn at a higher level than could be achieved through traditional teaching methods, and many are inspired to take their learning to a higher level. It is the outcomes of the heutagogical approach that engender the fervour amongst learners and their facilitators. This chapter looks at a selection of the comments from the users of heutagogy. You can make your own judgement and your own analysis of their meaning.

Learner Behaviour

Individual learners have individual reactions to being asked to learn through a different approach. Reactions will depend on the personality of the learner, the way they are introduced to heutagogical learning, their relationship with fellow learners, their relationship with their facilitators, and the culture in which their learning has so far been taught or experienced. Parts of the individual's personality that have an impact include their degree of self-confidence, and their willingness to accept change. What we have is a multi-variant situation which precludes ready analysis: everyone

experiences life and learning differently. However, it is possible to find a handful of behaviours which are more prominent than others, and these are interesting.

Learner behaviour can be looked at through the lens of the learners' self-reporting, or through the eyes and ears of the people who are facilitating the learning. We will look at the work of facilitators in the next section. Now let's look at what learners have experienced.

Over a number of years, I have collected a multitude of responses from learners about their experience with heutagogy. These learners have included business students, medical and nursing students, high school students, international students and learners in government organisations.

Initial reactions when introduced to heutagogy

When we were told that we had to learn with a new method I felt insecure. I wanted to know more. I needed to know why we had to learn differently.

The lecturer explained that this would be a chance for us to decide for ourselves what we were going to learn. That was exciting. Definitely a challenge, but exciting.

As an international student I felt that I had paid to be taught so I wanted to be taught properly. I was angry but could not tell my parents about it.

I had heard about this heuty (sic) stuff from a friend who did it the previous year. I was keen to give it my best shot.

At first you think "this can't be right". After all, everyone has learned from teachers for many centuries. But then when you see other students getting enthusiastic you have to think that maybe it could be interesting.

I didn't like being taught in high school. But then I was asked if I wanted to do a special program where I could choose what to learn. I couldn't believe it was real, but it was. It was (expletive) unbelievable.

I didn't really believe what we were told. How could we be trusted to study? There had to be a point in the course where eventually the teacher took over and taught us. How wrong I was.

I am older than the average student so I have travelled and learned lots of different things. What the lecturer was suggesting was that we try something new, something different. I was up for that, thank goodness.

In nursing you learn that there are always new things to learn, new equipment, new drugs, new procedures and so on. This was not just something new, but really a new way of learning. I felt a bit hesitant, naturally, but it seemed like a good idea.

As when facing a change to the way in which we have previously acted or thought, beginning to learn through a heutagogical approach presents a challenge. The range of responses range from students wanting to dive in and start learning, through those that have some concerns, and ending with those who appear to be in denial about the new approach. What helps students surmount this perceived hurdle is a clear and detailed explanation of the process, and an assurance that there will be a positive outcome.

The behaviour of some teenage boys who had been classified as 'problem learners' changed markedly when I gave them the opportunity to take part in a special program based around heutagogy. They not only took on responsibility for their own learning (with a hint of guidance) but displayed positive changes in behaviour. They became less aggressive, more communicative, and greater co-operators with their fellow students. By the end of the program the teenagers had developed an attitude that they all 'belonged' to the learning group, and that they could all learn from each other. There was also a decrease in the use of less desirable language.

Mid-study reactions

I'm loving this way of learning. You wouldn't believe how much there is to learn. Honestly, I spend more time than expected doing my research etc, but it's great.

There are three of us in our group. We started with a meeting once a week, but now we meet all the time. It's kind of casual, but we talk all the time. There's so much to discover. We learn ourselves and we learn from each other.

This is hard work. I have to ask my lecturer for help every week. I don't think I'm achieving what is needed. I have to try harder because I want good marks for graduation.

I'm a bit up and down. There's so much to learn, and that's great. But, I have to do a heap of work, more than I've ever done before. And you have to keep going back to see how what you've learned fits in with your actual topic.

It feels like something in my brain got switched on. I get this learning. Why haven't we done this before?

When I talk to my teacher about what I've been doing, she's really cool. She doesn't tell me what to do. She kind of asks me questions, and so I get more ideas about how to learn.

It's very satisfying that I 'own' my learning. Others help me, but basically, what I do and how I do it is my responsibility. Actually, it feels great to be in charge of my life.

It's taken me quite a while to get with the program. Now I'm running to catch up. There's stacks to learn. I get a buzz from my work.

Honestly, I got the shakes when we first started, I was worried. Now I know what I'm doing. I'm learning fast and my mind is wide awake. I wake up ready to do more research, even if it's before breakfast.

At the start of the course, I had so many things I wanted to investigate I kept changing ideas. Eventually I realised that what I actually wanted was an area of learning which was significant not only to me right now but would be a long-lasting interest.

There are perhaps some differences here in the comments between those in small groups and those learning individually, but any differences are very probably due to personality differences rather than to the value gained from the learning. What is common is the learner's ability to undertake their own learning, and to focus on what is important to them. And to learn with enthusiasm because they have responsibility and ownership for their learning. Reaching this stage of confidence takes time, different periods for different individuals, but it is an essential step in getting learners to develop their own ways of learning and being able to assess what is important for their individual learning.

Reactions on study completion

If I think about it, it's a bit mixed. It was a lot of hard work, but that was my decision. Apart from learning in depth about (subject), I have come to understand the way I learn. The result of that is I want to keep learning, but I need to get a job to support that. I don't think I will ever stop learning.

I did a long presentation to the class. Everyone clapped including the lecturer and that was fabulous – they said I'd done a great job and they meant it. It took up a lot of my time, but that was the way I learned. I'm happy that I learned, that I did a good job and that people appreciated what I'd done.

I have the feeling that I have only just begun a new journey into learning. During the reviews my lecturer helped a lot, not by telling me what to do, but by listening to what I was learning, and then asking questions. I realised that I needed more practical information rather than just the theory, so I went to (law) court to learn more. I would like my children to learn like this if they get the opportunity.

It was not hard at first for me, I am a pretty shy nerd and used to doing things myself. But then I found that I had to constantly interact with other people, both students and with people from whom I wanted to gain information. The frequent exchanges of ideas and progress reviews gave me the confidence to question myself as well as others. This way of learning has opened me up, and I feel good about working with others and going on to greater learning.

This course showed me that learning for yourself is more beneficial, in my experience, than being taught what somebody says you have to learn. It was a long semester but I learnt much more than I'd learnt in any previous semester. Not just about my topic but about how I learn, and to me that is the best part.

Running workshops for people in my organisation was a routine sort of thing and not much of a challenge. Now I can see how to get people really engaged by giving them the opportunity to explore what is important to them. It may take more effort to run the new workshops but I am sure it will be worth the effort in terms of participants' learning and workshop outcomes.

Although I had lots of difficulties with the studying I was learning much better than I thought. Nobody explains that your brain is getting bigger, you just learn and learn. It will not be a good thing to go back and have to experience the usual teaching.

The main themes in post-study comments are the effort expended during the learning, the positive attitude to the learning process, and the gaining of insights into self and how as an individual they learn. Most learners who initially expressed doubts and concerns about the learning process eventually conceded that the approach was successful and that they had benefitted from the learning. The double-loop learning which is an essential element of heutagogy is illustrated in the way learners reviewed their learning and refined their approach to their topics. Given human nature, it is perhaps inevitable that some learners may wish to return to a formal teaching/learning situation, albeit having had their eyes open to a wider world of learning. However, the awakened desire to continue learning is expressed by many learners, and we have evidence of learners gaining masters and doctoral level qualifications, as well as others branching into other fields of interest and achieving senior positions in private and government organisations.

Facilitator Experiences

Teachers and lecturers who decide to use a heutagogy approach with their students usually need first to gain approval from the institution within which they work. There might be some hesitation due to an institution's unfamiliarity with heutagogy, its reluctance to allow learning to stray from a set syllabus, or the need to preserve the institution's standing by insisting on a fully formulated assessment system of student achievement. Hopefully, this picture is changing as more institutions around the world adopt heutagogy as part of their teaching/learning modus operandi. Please note that heutagogy is viewed as only a part of the learning system because there will always be disciplines or units where adopting a heutagogy approach may simply not be feasible or practicable.

At the start of a course the facilitator needs to explain in detail how the learning will be undertaken, what the learners' responsibilities are, and what role he or she will play in assisting the learners. Learners embarking on a new course can be expected to have many questions and concerns, and it is important for a successful outcome that facilitators respond to these before setting the learners free to go their own way. Back (2020) describes the importance of this initial stage in his work with adult students in Israel.

During the learning program the facilitator will check progress with individuals or groups of students. The purpose of these reviews is to listen to learner's ideas and their planned progress, to provide encouragement, to ask provocative questions perhaps, but to avoid giving direct guidance. While face to face reviews are probably preferable, since the advent of MOOCs online learning has become increasingly common. Indeed, the worldwide impact of Covid19 resulted in online learning and the holding of learning reviews becoming the only choice for learners and facilitators. The situation may change once a vaccine has had universal application, but it seems likely that online learning and online interactions between facilitators and learners will continue to be a significant element to the learning provided by

institutions. Such online activity is the only option for distance learners, and there will continue to be many thousands of them around the world.

Assessment of learning may give rise to discussion. Can learners really be allowed to assess their performance; shouldn't the facilitator make the assessments? Moreover, can the assessment method be stipulated (some form of exam?), or should learners be able to choose their preferred method of assessment. Much will depend on the rules of the institution, but the most common methods seem to be a written paper (assessed by fellow learners and/or the facilitator), a presentation to a group (similarly assessed), or something innovative such as a play, a video, or a class workshop.

The role of a facilitator requires people who are not welded to the belief that they have spent years learning, that they perhaps have a status within society, and that their job is to pass on that learning to students. Facilitators, like their learners, need to be flexible both in their approach to providing courses and in the ways they assist and encourage their learners. And if their approach is successful, they too can expect to also be on the path of continual learning.

Conclusion

Obtaining feedback from learners about their individual heutagogical learning experience is a critical factor in our being able to reflect on learning experiences; it is also essential information for learning facilitators who wish to provide appropriate guidance to the learners. This feedback is best obtained periodically from learners so that the approach can be adjusted to ensure that it is truly learner centred.

While this chapter has provided only a small sample of feedback it is meant to encourage the use of heutagogy and other methods that promote learner agency. It remains for other researchers to conduct large scale studies to thoroughly evaluate heutagogy and provide evidence for its principles and practices.

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