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Learning Power: Taking Learning-Centredness Seriously in a Blended Learning Environment

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Introduction

The focus of this chapter is the 'in-practice' struggle between two educational paradigms, one that says learning needs to be explicit and rigorous and is therefore teacher-centred and the other that learning needs to be based on the needs and interests of the student and is therefore learner-centred. We suggest that a teacher-centred paradigm still dominates in contemporary education in a variety of ways, despite some claims to the contrary.

Contributing factors include the following:

- compliance requirements;
- urgent time frames to complete teaching the content;
- reporting mechanisms within required time frames;
- reduced government funding;
- current excitement and pressure to implement/integrate digital learning;
- competing priorities.

Added to this set of constraints is a context where the enrolment and teaching of peoples from different language groups and cultures (diversity as opposed to homogenous Western learners) actually represents the context's particular purpose. Yet there remains the likelihood of high dropout rates. It is mythical in a negative rather than affirming

way to think that in such a context learner-centred approaches can be taken seriously. There are two main reasons for this assertion: first, it takes time for teaching staff/educators to go through a transformative process themselves from teacher-centred to learner-centred pedagogy; second, they then have to have the time/space to design their learning programmes in ways that significantly depart from what they have done before. Unless there is planned time and support to achieve such a transition as an institutional priority, the educator cannot help but be reduced to teacher-directed models of delivery.

This chapter evaluates how one institution in Vocational Education and Training (VET) based Training and Assessment (TAE) attempted to design and deliver effective learning programmes for its students. The course (Certificate IV in TAE at Batchelor Institute of Indigenous Tertiary Education) targets trainers who are Indigenous Australians and/or are expected to work in Indigenous contexts in Australia. The design proposes the use of several ideas and methods, including Learning Power (Deakin Crick, 2007), the 4MAT design system, which is a learning design method that designs learning in terms of the ways people perceive and process information (McCarthy, 2012) and inquiry-based learning cycles. Thus while our case study is of a singular institution, our theoretical framework as well as the applicability of our insights are much broader. Learning Power is an evidence-based model rooted in the characteristics and dispositions of effective lifelong learners (Deakin Crick, Broadfoot & Claxton, 2004), which will be discussed in more depth later in this chapter. Using these ideas and methodologies this chapter argues that instead of a mythical dichotomy between learner-centredness or teacher-centredness, we can develop a systems/complexity approach to teaching and learning where a simultaneous teacher-centred and learner-centred approach (as a blended learning environment) can evolve to achieve improved student learning outcomes.

The context

To claim that a course and study programme is 'learner-centred' is commonplace in many contemporary educational contexts. The teacher and learner together (based on what the learner already knows, feels and can do), design, implement, monitor and assess the learning. Much is written about the merits of learner-centred approaches in theory. Indeed, an increasing number of learning and teaching approaches have

learner-centredness at their core, such as problem- and/or project-based learning (PBL), inquiry-based learning, or learning approaches based on learning styles (Van Berkel et al., 2010; Biggs & Tang, 2011; Thomas & Brown, 2011).

Yet there appears to be diversity as to what learner-centredness actually means in practice, and having a theory or a belief in learner-centredness does not automatically create a translation of that theory into practice. It is unrealistic to think that having a belief in a theory means an educator amidst their daily constraints can seamlessly translate that theory without undergoing some kind of transformative process themselves. At the same time, there are an equal number of theories and approaches that could be called teacher-centred or explicit teaching. This notion is here contrasted with learner-centred approaches, although it is recognized that there are no strict binaries here.

Discussion on learner-centred approaches in this chapter focuses on:

- learning styles;
- differential pedagogy;
- Learning Power;
- the 4MAT system of leadership and design.

Learner-centredness may be accepted in theory but can be often underestimated in relation to the shift in teaching practice required (Tapscott & Williams, 2010), and as a result not always put into practice, despite claims to the contrary. This apparent disconnect about what it actually means and what it looks like in practice explains the sometimes heated arguments and divisionary ways in which arguments against it are framed. The latter applies particularly to discussions pertaining to learning styles, even if they are not synonymous with learner-centredness.

Learning styles

Advocates of recognizing different learning styles argue that individuals have preferred ways of doing, thinking and feeling about learning. The terminology that Rayner (2007, p. 24) has identified in arguments against learning styles includes 'snake oil', 'a teaching elixir', 'a dangerous chimera', 'fool's gold' and even more straight to the point: 'clap-trap that should be binned'. More recently, Jennings (2012, p. 191) has asserted the need to '[escape] from the "sorcery" of learning styles' in a passionate defence of "the sage on the stage"'.

However, these arguments are based on a flawed assumption that learning styles are the 'be all and end all' of learner-centred pedagogy. Jennings' (2012, p. 193) argument is based on an examination of 'how and why learning styles research moved preferred instructional methodology from the "sage on the stage" approach to the "guide on the side"'. These metaphors are frequently used in the literature about specific learner-centred approaches, such as PBL (Wee & Kek, 2002). Such approaches are not simply about identifying individual students' preferred learning styles and then 'pandering' to their preferences. Instead, their aim is to use diverse approaches to engage diverse learners.

This intention does not mean that lectures are inappropriate to the learning process, nor does it mean that all learning has to be done in groups. It does mean, however, that educators should aim to engage all learners rather than a select few, which in turn means that they need to design learning to target the specific learners they design learning for. Thus, learning styles may be part of a learner-centred approach, but should not be equated with it. Furthermore, 'if learning styles exist, they constitute only a part of students' attitudes towards their study, and so only account for part of the story of student learning' (Kinchin, Baysan & Cabot, 2008, p. 376).

Differential pedagogy

As Rayner (2007, p. 27) suggests, 'style-led assessment... [is] formative assessment located in the process of learning how to learn [and] should be part of a wider approach.' He calls this wider approach a 'differential pedagogy', which is based on the important recognition that there is no one-size-fits-all approach, but that each learning situation and context should be assessed on a case-by-case basis. Ironically, by the end of her lengthy arguments against learning styles, Jennings (2012, p. 229) argues that 'the sage instructor who is effective relies on a basket of tools.' She goes on to say that 'the thoughtful sage will use appropriate methodological tools for the subject matter, for the size of the class and, allowing for the assumption that students are at different stages in their ability to learn'.

Whether the teacher is a sage, an instructor or a facilitator becomes immaterial if we use differential pedagogy to target learning where learners are at, so that the learning becomes relevant and is appropriately challenging. Thus, if we move beyond the view that equates learning styles with learner-centredness and move towards 'differential pedagogy', we find that there is significant evidence to suggest that various learning-centred approaches have been effective, especially when it comes to the development of what are sometimes called 'soft skills' or transferable skills, such as critical thinking, communication and problem-solving.

Importantly in this respect, Hubball and Poole (2003, p. 12) draw a distinction between learner-centred and learning-centred education, which is worth quoting at length:

> [Learning-Centred Education] LCE requires a community of student/learners to make choices within a responsive, carefully structured, and guided learning environment. [...] LCE includes both individual and collaborative learning experiences and places emphasis on the investigation and resolution of authentic problems through interactive and experiential engagement. [...] Thus by calling a programme 'responsive', we mean that it responds to the diverse needs of the learners, critical teaching and learning issues in university settings, and available resources.

The main theme here is the importance of diverse strategies to engage diverse cohorts of learners or 'a broad repertoire of pedagogical strategies, on a continuum from teacher-centred to learner-centred' (Hubball & Poole, 2003, p. 13). This theme is far removed from 'pandering to learners' whims' as outlined above and indeed has the potential to effectively address not only a changing student demographic in higher education (HE) but also the rapidly changing skills needed to function in contemporary societies.

For many educators, there appears to be a disconnect between learner-centred and teacher-centred practice, which involves competing priorities of time pressure, accountabilities, compliance, Actual Contact Hours (ASH) hours, assessment requirements, outcomes and the volume of content which together create an often overwhelming tension for educators. These conditions thus result in a focus on teaching, completing the curriculum and 'getting the job done' as opposed to translating learner-centred principles into practice.

Responses to this dilemma can be seen in Deakin Crick's (2007) notion of 'Learning Power' (dispositions) and McCarthy's 4MAT system (2012). Deakin Crick's (2007) research specifically defines learning and is referred to as Learning Power. It is an attempt to conceptualize a paradigmatic shift in what learning means in the 21st century, and it outlines a framework that could be seen as radically learning-centred.

McCarthy's 4MAT system is more directly practice-focused and describes a series of iterative learning cycles which are conceptually focused and incorporate both learner-centred and teacher-centred learning activities. These learning cycles incorporate multimodal learning objects and a combination of left-brain and right-brain activities.

When educators deeply understand their own 'Learning Power' and are personally implementing their own plan to build Learning Powers within themselves, this process of transformation assists in the more serious translation of learning-centred theory into practice. By then applying the 4MAT system to reflect upon their current educational design processes and making relevant changes that align with the philosophy of learning and teaching represented by these ideas and methodologies, such educators are maximizing the translation of that theory into practice.

Learning Power

The concept of Learning Power and its associated learning dispositions is important to this analysis because it addresses a number of key issues that HE (and education in general) is facing as well as interacting with a number of assumptions relating to practice that can be considered to be myths. Profound changes have taken place under the influence of what some call the 'digital revolution' (Davies, 2012). This revolution has not only changed the ways in which learners access information (and by extension education in general) but is also challenging the role of traditional educational institutions, and most importantly, the ways in which such institutions might prepare learners to function effectively in this changed environment (Bradwell, 2009).

Deakin Crick (2007, p. 137) contributes to this discussion of putative revolution by describing a need for a 'paradigm shift towards a relational and transformative model of learning, in which the creation of interdependent communities of intentional learners provides a basis for the integration of 'traditional academic' skills and outcomes with the learning dispositions, values and attitudes necessary to meet the demands of the emerging 'networked society'. The key term here is 'intentional learners' because it suggests lifelong learners who are able to identify what and when they need to learn and recognize how they will best be able to learn effectively for the goals and aims they set themselves. In other words, these are learners who take control of their own learning, who have an awareness of their own strengths and weaknesses

and who use this awareness to both learn and grow their own learning capabilities.

'Learning Power' provides a framework for highly learning-centred (and by extension learner-centred) design of productive 21st-century learning programmes.

> The concept of learning power and learning how to learn must be understood and contextualized as part of a complex system in which the formation of a learning identity, personal power to learn and competencies for managing life in the post-mechanical age are as important as the acquisition of knowledge.
>
> (Deakin Crick, 2007, p. 136)

This is true for both the learner and the educator and draws attention to the 'practice' component of this chapter.

Critics suggest that learner-centred approaches neglect 'the rigorous acquisition of knowledge', otherwise known as discipline content, and thereby waste too much time, which could be better spent 'acquiring knowledge' or from a teacher's point of view providing knowledge for the learners to absorb. To compensate and to save time, the sage on the stage asserts itself as the dominant pedagogy. However, using the kind of approaches described by Deakin Crick and others, authentic learner-centred approaches do anything but neglect the acquisition of knowledge. Rather, they aim to provide learners with the tools to do the knowledge acquiring themselves and, moreover, develop the ability to confidently select the appropriate knowledge to acquire for their particular contexts and learning purposes.

The 'learning dispositions' identified as part of 'Learning Power' and the Effective Lifelong Learning Inventory (ELLI) tool that forms part of the process are central to this framework because they provide a practical way to develop learners' (including educators') awareness of their own learning dispositions, to assess their learning dispositions at any moment in time and to use this understanding to plan further learning, targeting both learning how to learn as well as the learning of the curriculum. In this way, learners can develop lifelong learning skills.

The original Learning Power and the ELLI research (Deakin Crick, Broadfoot & Claxton, 2004) set out to identify the characteristics and dispositions of effective lifelong learners. Seven dimensions of 'Learning Power' emerged, via factor analysis, each with elements of thinking,

feeling and doing. Learning Power reflects the sorts of personal qualities people need to engage effectively with new learning opportunities. It is more than simply a style or a way of thinking or doing – it is a way of 'being a learner' that is appropriate for the 21st century.

The seven dimensions of Learning Power are as follows:

- changing and learning: a sense of myself as someone who learns and changes over time;
- creativity: risk-taking, playfulness, imagination and intuition;
- critical curiosity: an orientation to want to 'get beneath the surface';
- learning relationships: learning with and from others and also able to manage without them;
- meaning making: making connections and seeing that learning 'matters to me';
- resilience: the readiness to persevere in the development of my own Learning Power;
- strategic awareness: being aware of my thoughts, feelings and actions as a learner and able to use that awareness to manage learning processes.

Using these ideas, Deakin Crick and the original Bristol University research team developed what is now known as the ELLI (Tew et al., 2004):

> The learning inventory is an online questionnaire that is filled in by students according to how they see themselves as learners... The results provide a snapshot of the student's learning energy based on the seven dimensions of Learning Power (described above) which can be used as both a summative and a formative form of assessment. The assessment information is summative in that it sums up where a student is now and it is formative because it provides impetus and direction for development, growth and change.

If we consider 'Learning Power' as a learning framework, then at least four broad categories reveal themselves as making a substantial contribution (Jaros & Deakin Crick, 2007, p. 430):

- learning capacities: dispositions, awareness and skills;
- learning identity: the beliefs, values and attitudes about learning, self and knowledge held by the learner;

- learning story: the socio-cultural formation of learners over time; and
- learning relationships: the quality and substance of learning relationships.

These are intimately related but they hold different degrees of importance at different times and in different contexts. These broad categories in turn underlie the seven identified dimensions of Learning Power: changing and learning; critical curiosity; meaning-making; creativity; learning relationships; strategic awareness; and resilience. Each of these can be 'assessed' formatively and summatively within the learning process (Jaros & Deakin Crick, 2007). However, it is important to keep in mind that this assessment needs to be self-assessment for it to yield the desired results, as the questions require complete honesty on the part of the learner, and trust that the results will only be shared with those whom the learners choose to share them with.

The idea is that these assessments are done regularly and at appropriate times during the learning process. This action then provides the opportunity to develop each of the four categories outlined above. Although this is highly learner-centred, it works on a different level than some of the pejorative myths about learner-centredness have asserted and instead provides clear opportunities to develop the kinds of attributes that are increasingly expected of 21st-century learners. However, the Learning Power framework is one of a number of learning-centred frameworks that one can draw on, and indeed it is possible to select different elements for different purposes, as long as the design is coherent and targeted appropriately. Another highly learning-centred design framework, for example, is the 4MAT system, to which we turn next.

The 4MAT system: Designing to develop the learners' voice of expertise

'How does learning happen?' This question frames the entire conversation when educators come together to explore Bernice McCarthy's 4MAT system. The description of a learning cycle that is 'natural' and 'not new' incorporates the work of Lev Vygotsky, John Dewey, Kurt Lewin, David Kolb and many others and its 'value has withstood the test of time' (McCarthy, 2012, p. 75). 4MAT provides a model for educational design that is systematic and focuses on developing

learning cycles that incorporate the 'big ideas' or concepts as well as the acquisition of discipline-specific knowledge and skills. It provides the opportunity to include emerging technology tools (chat, forums, web-based tools, social media and email) in creating learning options. It encourages educators to break out of the traditional lecture approach to lesson design by using more active, experiential learning processes and strategies, as well as reflective modes of teaching.

A basic premise of 4MAT is that while students might favour different aspects/quadrants (according to learning-styles theory) around a 4MAT learning cycle, they need to go through each of four major steps when learning (Figure 2.1).

The cycle (or travelling the 'quadrants') includes the following:

Quadrant 1:

Motivation – creation of personal meaning

Quadrant 2:

Conceptual mastery – acquisition of knowledge

Quadrant 3:

Application of ideas

Quadrant 4:

Integration and transfer of learning to work and life.

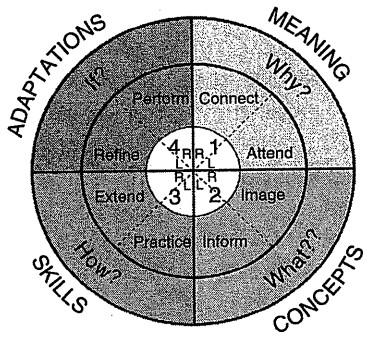

Figure 2.1 4MAT quadrants

In addition to acknowledging diverse learning needs, educators designing cycles with the 4MAT system apply both left- and right-brain thinking strategies, despite recent research calling this into question to some extent (Nagel, 2012).

- Left-mode thinking is sequential, segmental and essentially verbal.
- Right-mode thinking includes synthesis, finding and creating spatial relationships, using images, perceiving wholes from collections of parts, hands-on explorations and many dimensions of non-verbal reasoning.

When designing a learning cycle using the 4MAT system, the planning incorporates learning activities that encourage different ways of thinking within the four steps above, into a cycle of learning which is summarized below:

- Quadrant One – Motivation
  - Right-mode learning activities are used to create an experience for learners, or past experience is drawn from to establish relevance for studying the unit.
  - Left-mode learning activities promote reflection and analysis of the learner's experience.
- Quadrant Two – Conceptual mastery
  - Right-mode learning activities that form a bridge between personal experience and expert understanding.
  - Left mode focuses on defining facts and learning what the experts have to say, developing conceptual mastery.
- Quadrant Three – Application
  - Left-mode learning activities provide opportunity to practise what has been learned.
  - Right mode provides the opportunity to extend application, to bring together the skills and knowledge.
- Quadrant Four – Integration and transfer
  - Left mode focuses on the analysis/refinement of learner extension work, for usefulness and relevance.
  - Right mode aims at the integration and transfer of learning to other areas of life.

While the above description explains the cycle and how learning happens, the design process is considerably more complex. When designing a cycle of learning, an educator needs to contemplate the following questions:

- Who are the learners? What are their needs?
- What is the context of the learning?
- What outcomes will be achieved?
- What discipline knowledge is to be explored?
- What skills will be developed?
- What are the concepts/big ideas? Which of these will learners relate to?
- What learning activities will facilitate the successful achievement of outcomes for all learners?
- What assessment strategies will demonstrate learner achievement: what are the assessments?
- How might technology enhance/support the learning?

As learners travel the learning cycle they are asked to consider:

- What personal connection can I make with the 'big idea' (or 'concept') of this cycle? How might this 'big idea' be connected to who I am and what I already know or can do? What is my experience in this arena?
- What information and discipline knowledge can I access to further develop/enrich what I know?
- What applications do I need to develop and demonstrate skills linked with such knowledge and the course outcomes?
- How well did my application go?
- How might I take this learning into other contexts? How am I more skilled/knowledgeable as a consequence of this learning cycle?

On the basis of the experience and feedback from students as they travel through learning cycles designed using the 4MAT system, the learner is developing his/her own 'voice' of expertise rather than that voice being confined to the textbook or the lecturer at the front of the class.

Through practical application of *Learning Power* and 4MAT design, it was proposed that the 'disconnect' between the idea of learner-centred practices and what is required to change the dominant teacher-centred

paradigm might be addressed. We believe that when educators are able to experience Learning Power as a learner themselves and agree in principle to design and teach in learning cycles using the 4MAT system, they are better equipped to translate learning-centred theory into their practice. The following case study describes the journey in one context, a journey that came up against certain mythic impulses that tend to separate out the learner and the teacher.

Case study: Certificate IV in Training and Assessment

These ideas can now be applied to a particular setting and set of learning and teaching objectives. The starting point for this design was to develop a Certificate IV in TAE that was unique to Batchelor Institute of Indigenous Tertiary Education. The target group of learners for this programme consisted of Indigenous trainers or trainers working in primarily Indigenous contexts, often in remote communities. Batchelor Institute has a specific approach to learning, called 'Both Ways' (Ober & Bat, 2007), which has an underlying philosophy of starting the learning journey from where the learners are at and drawing explicitly on the prior knowledge and skills that learners bring to the learning environment.

Key objectives from the start of the design included the following:

- strengthening learners' engagement with learning and successful learning behaviours;
- innovating with practical, action and experiential learning which takes advantage of the community and the context of the learners;
- acknowledging and integrating Indigenous ways of knowing and doing;
- ensuring that content is relevant and applicable to learners in their context and strengthens pathways to employment or further employment-related training.

The learning-design methods outlined previously in this chapter (Learning Power and the 4MAT system) were specifically chosen to address these key objectives, and it is clear that they had to be learner-centred in order to ensure 'relevance' to the learners and to draw on the learners' contexts and ways of doing things. It is also clear that the educators facilitating the course would need to be able to effectively teach in both learner- and teacher-centred approaches.

In our first design discussions, we therefore explored the following complexities:

- the course had to target Indigenous learners or those training Indigenous learners;
- the learning experience would have to represent what we believed would be best practice for Indigenous learners (including remote community people), vocational education and 21st-century digital learning, all three of which would need to be aligned and integrated;
- curriculum design and development;
- the educators' effective delivery to model what we 'preach';
- a clear vision for what kind of learners/teachers we wanted our learners to become by the end of the course;
- contextual realities: for example, the target learners' contexts would vary from public service organizations, to mining companies, to remote businesses;
- the merging of all of the above within Batchelor Institute's mission, vision and 'both-ways' values and the Australian VET course requirements and performance criteria.

The design process began with a brainstorming session, bringing up the following central questions:

- What makes this course unique?
- What is effective learning in the context of Certificate IV in TAE?

The answers are captured in Table 2.1.
As we reviewed the working TAE programme that was being used by Batchelor Institute at the time, we agreed to use the curriculum design process described by McCarthy's 4MAT system and specifically embed Learning Power and other learning-centred pedagogical ideas within the course in contrast to other prevailing ideas. In interrogating course outcomes, content and skills, as well as existing packages, we first realized that we needed to start the whole course with a unit that discussed effective learning. This resulted in the creation of a new introductory unit entitled 'Introduction to TAE', which we called 'Effective Learning in Indigenous Contexts'.

Rather than launching directly into sessions about effective teaching and detailed examinations of the range of courses participants might initially teach (the 'content' of the course), we wanted first to invite participants to reflect on their own learning experiences and construct

a draft model of the attributes that helped them be successful learners themselves. This is the essence of Quadrant 1 activities within the 4MAT system, drawing upon, validating and reflecting upon the learners' individual experiences in relation to a concept called 'Effective Learning in Indigenous Contexts'.

On the basis of an explicit map of their own individual and collective experience, participants were invited to compare this with Deakin Crick's Learning Powers and to complete and reflect on their own ELLI profiles. At this point in a learning cycle the intent is to confirm existing knowledge and invite students to deepen their understandings about effective learning. As this draws directly on their own experiences, it is also explicitly designed to engage learners because it invites them to recognize and explore relevance to their own contexts.

The unit concludes with spending some time combining their personal experience with the research data to construct a group framework for what effective learning needs to look like, sound like and feel like for their own prospective learners. This is followed by a consideration of

Table 2.1 Questionnaire answers

What makes it unique? Central ideas	**Effective learning: Teacher dispositions (within the quality framework) Lecturers**	**Effective learning: Learner dispositions and TAE learning participants**
Relational/ connected	Co-create and sustain a learning culture where everyone is encouraged and inspired by each other's learning.	– Positively contribute to and participate in a community of learners in both the classroom and the wider world. – Feel valued and nurtured. – Create quality time for learning by myself, as part of a team and as a whole group. – Understand that life experience(s) are valued and used as a solid platform for designing their own learning and the learning of others.

Table 2.1 (Continued)

What makes it unique? Central ideas	**Effective learning: Teacher dispositions (within the quality framework) Lecturers**	**Effective learning: Learner dispositions and TAE learning participants**
Co-constructed, including my own knowledge, understandings, skills and the knowledge, understandings, and skills of others (fellow learners, lecturers, texts, web, videos)	Ensure knowledge is open to question, serves particular purposes and is shaped by culture and experience.	– Feel encouraged and safe to question, challenge and to delve more deeply. – Are encouraged to make and remake meaning.
Continuing craftsmanship development in profession	Continually stimulate critically reflective inquiry to develop professional practice in line with established professional standards.	– Seek and actively engage in professional dialogue. – Engage in critically reflective inquiry. – Apply professional standards/ competencies.
Culturally responsive to context	Are mindful about and responsive to cultural background and identities and embed this into the learning process.	– Feel validated and challenged. – Participate in positive learning relationships. – Demonstrate and develop empathy and open-mindedness within and across cultures.
Creative within context	Foster an environment that stimulates imagination, exploring multiple pathways, outside the square thinking, design and risk taking.	– Feel encouraged to think outside the square. – Explore a variety of modes to construct, make and communicate meaning. – Negotiate within the constraints of the course.
Efficacious (learning and work)/taking responsibility	Design and implement the programme around the principle of self-directed learning.	– Develop learner agency. – Develop personal responsibility for learning. – Identify learning purpose and outcomes, plan learning pathways, monitor learning progress and self-assess.

what this means in practical terms for them to be successful educators within and across this course as teachers/trainers/educators.

Reviewing the rest of the course then became a process of ensuring that this model of effective learning was consistently reflected in both: (a) the practice of the learning experience of the course modelled by the facilitator and (b) in the practice of the participants in designing and delivering their own teaching/learning experiences. It was essential to ensure that the designers could build in more time for metacognitive reflection around pedagogy both within the delivery of the course, about the course itself and then in applications of teaching other vocational courses.

During this project process, we recognized that there was not a shared understanding about design and pedagogy among the team working on this curriculum-development project. The group had been brought together to design a new approach to teaching and learning, but individuals had different ideas about what this would mean. It was agreed that there needed to be a common language and design process that was shared across the team that would help implement the new course. As 4MAT was chosen as the design tool from the outset, we decided to revisit this and make it more explicit, as we had decided that it would best achieve our goals for this purpose. 4MAT system training was facilitated for staff across Batchelor Institute and while these educators were engaged in the content and process of the design system, little time was made available for the coaching required for deep implementation. The process of innovation faltered here because time and resources were not allocated to allow the transformational learning required for the deliverers of the course. The educators concerned did not and have not yet participated in their

own ELLI and have not completed their own reflection regarding their Learning Power.

In the end, the four cycles designed using the 4MAT system became the structure around which the whole course was designed, while Deakin Crick's Learning Powers and ELLI were woven through this at appropriate points. The course now consists of four clusters:

- what is 'Effective Learning in Indigenous Contexts'?;
- designing for 'Effective Learning in Indigenous Contexts';
- delivery/facilitation for 'Effective Learning in Indigenous Contexts';
- assessment for 'Effective Learning in Indigenous Contexts'.

Implementation of the course has resulted in the design not only building in a variety learning experiences for all learners, but it also has a high focus on both learning and learner, as it explicitly explores and then builds on learners' strengths. Perception data from educators and students has confirmed that using 4MAT and Learning Power has made the learning more relevant to the learners and has engaged them more significantly than previous similar learning experiences. It has also provided opportunities to engage learners in areas they have not explored before (for example, specifically drawing out what teaching and learning in Indigenous contexts actually entails and what would be most appropriate and effective in those contexts). Overall, this design has created a greater balance between drawing on learners' prior strengths and explicitly contextualizing the learning on the one hand, and exploring new challenges on the other.

Despite the promising initial results and feedback, further time and resources need to be allocated to complete the innovation process first conceived for this case study. Time for the course educators to develop understandings about their own Learning Power and to embed their growing understandings as practitioners still needs to be found. Specific data collection and action research cycles that provide evidence of success and cycles of improvement with regard to Learning Power and the 4MAT design process would be highly desirable in the search for learner-centred and teacher-centred balanced pedagogy.

Conclusion

'Learner-centredness' is much discussed in contemporary educational contexts. However, it is also surrounded by mythical thinking that has the potential to devalue its importance. On the one hand, there

are teachers who make assumptions about learner-centredness in their teaching and learning designs which are not necessarily practised in the actual learning context, and which are at times based on misconceptions/misunderstandings about what learner-centredness actually means, as the discussion about learning styles has shown. Add to this the complexities of the environment. Even when there is genuine desire to change practice, it is fraught when people are stressed due to workloads, time pressures and competing priorities. It appears that when technology is also brought into this mix, it takes considerable time within existing workloads for people to feel competent to use the technology effectively.

Thus, it is mythical to think that learning-centred approaches can be successfully developed and implemented unless educators are given dedicated time/space, coaching and support from their institutions for thinking/conversation about tools/methods to assist personal transformation and ultimately a more effective learning-centred curriculum.

In this chapter, we have outlined a practical framework for a highly learning-centred and learner-centred approach to learning design, based on the 4MAT system, and integrated with the concept of Learning Power and its associated ELLI tool. Learning Power and 4MAT have different purposes. While Learning Power's purpose is to enable intentional learning and self-reflection, while developing metacognitive skills in the process, 4MAT is a practical learning-design method for educators, which translates the idea of differential pedagogy into reality while developing the 'voice of expertise' of the learner. Together these methods contribute to making a learning context that caters for all learners and starts from where they are at. In this way it is an ideal approach for an education context characterized by diverse student cohorts and, more importantly, it equips learners with 21st-century skills.

The approaches discussed in this case study provide the opportunity for educators to undergo the transformative process that will support them to translate theory of learning-centredness into practice. In so doing, such educators take learning-centredness seriously in a deliberate and conscious attempt to learn with their students in the 21st century rather than 'doing it to them'.

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