institute for adult learning singapore

Report

Whose IDeA is this?

Facilitating professional reflection and communication through the IAL Design Approach (IDeA) Model

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This project builds on a model of curriculum developed by Peter Rushbrook (see Bound, Rushbrook & Sivalingam, 2013) that in this report we call the Institute for Adult Learning (IAL) Design Approach (IDeA) Model. The present researchers (Bound and Choy, in consultation with Rushbrook) envisage the Model as a tool for designers and facilitators of learning to reflect on their assumptions about curriculum, learning and learners. However, participants also identified many other potential applications, including for structured continuing professional development and as a communication tool at all stages of curriculum development. Given the changing landscape and focus of the Continuing Education and Training (CET) sector, these suggestions offer considerable potential to facilitate change; indeed some described the Model and heuristic as potentially "transformational".

In the process of conducting the research, the Model was refined, undergoing several iterations as a result of feedback from participants. Most were changes in the language used to describe the various dimensions.

What do we mean by 'curriculum'?

How 'curriculum' is understood in this report and within the IDeA Model is important, as the IDeA Model seeks to deepen and broaden understanding of curriculum by encouraging reflection on current beliefs and assumptions about curriculum.

A typical understanding of curriculum is that it is a framework or set of documents, and that it is essentially about content to be taught. These understandings can be described as instrumental, pragmatic perspective of what curriculum is. But there are deeper conceptualisations of curriculum that note its purpose (implicit or explicit) as a tool for reproducing dominant ideas, and ways of thinking and being, an emphasis on the learners, involving questions about the roles of teachers and learners and the ways in which learning and content are scaffolded. Curriculum is also understood as a journey:

> *Currere is derived from the Latin infinitive verb that means "to run the racecourse". Curriculum is a verb, an activity, or "an inward journey".* (Slattery, 1995, p. 56)

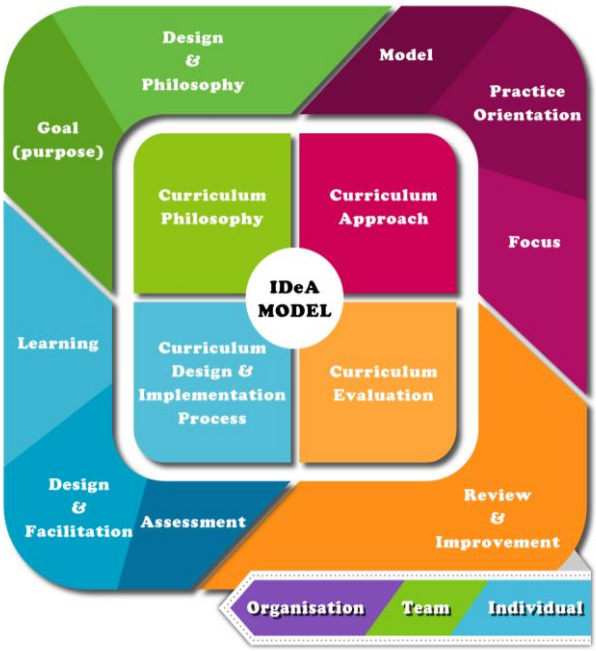
The IDeA Model

The IDeA Model encompasses this range of understandings of curriculum as a means to encourage users to reconsider their underlying assumptions and beliefs. The results from the Bound et al. (2013) study revealed two forms of curriculum – 'interpretive' and 'technocratic' (which we subsequently renamed 'instrumental'). In the IDeA Model, we place these two understandings of curriculum at opposing ends of a continuum. The placement of the 'interpretive' label at one extreme of the continuum represents a conception of curriculum as a flexible, dynamic and engaging map of learning possibilities guided by a consistent philosophy of learning. Within this interpretive approach, there is a tendency to favour an active relationship between the learner and the facilitator; the learner is to be respected for his or her choices in education as a lifelong journey, and the facilitator is encouraged to view the curriculum as a lens through which to exercise professional judgement and innovation.

The placement of the 'instrumental' label at the other extreme of the continuum represents the opposing idea to the 'interpretive' category. At the instrumental end of the continuum, the practicalities of working within a highly managed environment – where curriculum, defined in instrumentalist and pragmatic ways – drives decisions in curriculum design. As such, more often than not, curricula are considered purposive and directed to skill development needs: there is a clear market orientation, often implied, towards employers, stakeholders and learners. At this end of the continuum, curriculum is expressed as a series of measurable outcomes (through, for example, competency-based training) indicative of the requirements of work. The Model can therefore be used at the level of the organisation, unit or individual curriculum design practice.

Guided by the IDeA Model heuristic (see Appendix 1), **along the 'interpretive' and 'instrumental' continuum**, users can identify and name their beliefs and assumptions in relation to each of the dimensions. In so doing, users, together with their design team members and senior management, will have opportunities to ask deep questions and surface their assumptions on decisions about:

- curriculum philosophy, including pedagogical beliefs and practices;
- the purpose of the programme/course and whose purposes the programme/course serves, including graduate outcomes;
- curriculum design and implementation, including delivery choices (e.g. classroom, e-learning, workplace learning), ways in which learning is facilitated and assessment approaches and strategies, what the practitioner believes learning is and how learning takes place;
- evaluation strategies and processes.



Design, development, selection and adaptation of curriculum require an analysis of its underlying assumptions, as well as its suitability for a particular group(s) of learners. Assumptions consist of tacit beliefs about the purpose of education, about the intended audience, about the way people learn, about teachers/facilitators and the best ways to teach, about the subject matter and how it should be organised, and about the community and what it values (Posner, 1995).

How we undertook the study

We used a simple qualitative design whereby participants used the Model themselves by completing the heuristic and then engaging in a reflective discussion with the researcher on their experience of using the Model, their suggestions for improving the Model, its perceived value and potential applications. We conducted semi-structured interviews with 30 participants, who were drawn from different sectors in the CET community. Participants possessed a wide range of experience, from the novice curriculum designer (less than 3 years' experience) to those with more than a decade of curriculum design and review experience. Many were also involved in roles other than curriculum design, such as training management and quality assurance. In addition, we gathered stakeholders

(n=16) from the Singapore Workforce Development Agency (WDA)'s Training Partners Development Division (TPDD), IAL, CET providers, adult educators, polytechnics and universities, who read through a draft of the report and came together as a reference group to contribute their responses and suggestions.

How the IDeA Model can be used

The IDeA Model created a sense of excitement about possibilities among the participants and many in the reference group. The following suggestions for its use are drawn from participants, with researchers providing more details:

- A curriculum designer could use the model and its heuristic to 'map' the curriculum they have developed and/or been involved in developing. On looking at the different responses for the different curricula, they may be prompted to ask themselves questions such as:
    - Why is there a difference between my responses to different curricula? What role does the context and client play? Does the Singapore Workforce Skills Qualifications (WSQ) system, for example, really 'have' to be like I think it is?
    - Is a particular response more interpretive because the client had a holistic understanding of the outcomes and learner engagement?
    - What do I believe learning is? How do I think learning happens? What is needed to encourage learning to take place?
    - What do I believe teaching/facilitating is? What are the characteristics of 'good' teaching/facilitating?
    - How do I know learners have learned?
    - Are there ways in which the teacher/facilitator and learner can make judgements about learning along the learning journey rather than at the end?
    - What do I think the role of the learner is?
    - What do I think the role of the teacher/facilitator is?
    - How has my experience influenced what I believe and do now?
    - To what extent do I as a designer have interaction with those who enact the curriculum? Why so little (or so much) interaction and does the interaction, or lack of it, influence how I think about curriculum design and development?
    - How can I build the responses of learners, their assessments and teacher/facilitator feedback into constantly adjusting and reviewing the curriculum? Can I create space for this to happen in the way I design and write up the curriculum?

  The above provide just a few examples of the myriad of questions that can be posed. Clearly, in considering these matters, it is useful for the individual to have access to a group of others who are undergoing the same experience and to share ideas, ponderings and thoughts; hence the suggestions for an ecosystem/community of practice by participants.

- The Model and its heuristic might be used (as suggested by participants) at the very beginning of the design process when discussing the purpose of the curriculum and ascertaining its outcomes. This dialogue often takes place between curriculum designer/developer and client. If the intent and approach is not clearly understood in the same way by both parties, then the process can go badly wrong, requiring multiple rewrites. To avoid this happening, the curriculum designer/developer could work through the heuristic with the client, discussing each dimension and sub-dimension and where along the continuum they are. The dialogue provides an opportunity for reflection in action, with potentially each party encouraging the other to consider and reconsider various aspects as they explore what it means to place themselves at one point, not only for that sub-dimension but for all the dimensions. Thus the final outcome may be quite different from what each party originally had in mind, as they carefully work through the heuristic together.

- The Model and its heuristic can also be used within teams. If, for example, the team includes the curriculum developer/designer and those who teach the curriculum, the designer can use the tool at the beginning of the design process in a similar way to that outlined above. Those who teach/facilitate often know the learners and have ideas about the design elements of a curriculum that would assist learning. Using a team-based approach to design that includes the teacher/facilitator may currently not be common in parts of the CET sector, but there is no reason it could not become a standard practice. The process itself becomes a staff development process that takes place every time there is a new curriculum to be developed.

- Similarly the tool could be used as individuals in the team grow and develop to constantly review the curriculum and adapt and adjust it according to changing needs and new ideas. In the same way as suggested in the previous point, this process becomes a professional learning opportunity that is built into the work itself.

The Model and its heuristic is *not* a measurement tool. Using the tool for this purpose negates its possibilities for creating dialogue and reflection. While we lean towards the interpretive perspective for better learning and therefore better curriculum design and philosophy, we also acknowledge that different purposes and accreditation processes will continue to focus on the more instrumental approach, at least in terms of the design philosophy and goal. To change this, it behoves the regulators and tripartite bodies to consider the ways in which competency standards might be written more holistically, as discussed in the recent WSQ review. In addition, there is a considerable difference between short courses and longer ones where there are greater opportunities and latitude for innovative design. As suggested by participants and reference group members, what we do not know is the degree to which different disciplinary and vocational/professional knowledge and its structures mediate curriculum philosophy. This is a potential area for further research. Other areas for further research include exploring the potential for mapping different types of curricula – will it tell us anything useful? The results from our 30 participants indicate that this might be the case. If these initial indications hold with further research and use of the Model and its heuristic, then they are also useful in providing evidence for policy and management of systems at institutional and national levels. Finally, the Model and its heuristic have been seen by participants and reference group members as a tool for change. One reference group member makes this point:

The heuristic will work well on decision makers within the practising CET sector too, so that future curriculum will more naturally veer towards the desired outcome. In other words, this has transformational potential, but needs to be taken on early enough and at high enough levels, for it to work well.

For the transformational potential to be realised, it is important that recommendations be picked up and acted on. The following recommendations are a consolidation of the suggestions from participants and the reference group.

	a) **Immediate or near-term implementation**	*b)* **Mid- to long-term implementation**
Develop self-help resources	• Develop a hard copy handout/collateral for practitioners on how to use the Model and heuristic • Develop self-help resources to support users of the Model and heuristic in deeper reflection and team discussion, and place on the IAL website. Additional resources could include: ○ case studies that analyse different responses to different curricula as examples ○ reflective questions against each dimension	Develop additional online resources administered by the Adult Education Network and IAL (e.g. video case studies) and encourage sharing by practitioners to showcase use of the Model for different purposes (e.g. for individual reflection, for team reflection, as a dialogue and communicative tool to engage stakeholders in establishing the intent of the curriculum to be designed, as a dialogue tool for providers in engaging curriculum designers)
Conduct workshops/training and facilitated discussions	• Provide workshops for professional development using the IDeA Model and heuristic to engage practitioners in reflective discussions that will deepen their curriculum design understanding and expertise • Incorporate the IDeA Model into current programmes in IAL	Provide consultancy services to training organisations on curriculum design and review
Build an ecosystem and a community of practice	• Disseminatethe Model via online platforms such as LinkedIn and Facebook • Engage regulatory agencies in dialogues to align curriculum design terminology so there is a	• Collaborate with enterprises to trial the use of the IDeA Model with their learning & development departments

	common language between quality assurance agencies and their auditors, providers and curriculum designers • Run workshops for quality assurance personnel in different systems	• Develop platforms or build on existing platforms to share different uses of the IDeA Model and heuristic across different pedagogical communities (e.g. literacy, special education, occupational health and safety, adult educators from different industries, etc.) to build an ecosystem to support curriculum excellence
Further research	Engage the research community for collaborations and to spur further studies to drive adoption by the CET industry	
Ensure the IDeA Model remains dynamic	Continue to receive feedback to update the model and match the needs of users	• Present the findings from the research study at international conferences and in peer-reviewed journal articles • Conduct further research through the above-recommended activities

CHAPTER 1: INTRODUCING THE PROJECT

1.1 Introduction

In this report, the Institute for Adult Learning (IAL) Design Approach (IDeA) Model[1] is further developed into a tool for designers and facilitators of learning who enact the curriculum to reflect on their assumptions about curriculum, learning and learners. Given the changing landscape and focus of the Continuing Education and Training (CET) sector, the many other potential applications of the Model, as discussed in Chapter 3, offer considerable potential to facilitate change.

The current Singapore Workforce Skills Qualifications (WSQ) system has served Singapore CET well in the past decade. However, to meet the demands of the 21st-century workforce, the CET sector needs to make space for more flexible and dynamic curricula for the purpose of developing in-depth expertise within the workforce. As noted by Säljö (2008, p. 317), "[t]he assumption that present day work practices can serve as criteria for successful learning practices is grossly overrated."

Säljö (2008) goes on to note that:

> *the challenge for education and educational research is to organize learning experiences in such a manner that students appreciate being in a position of acting as learners … learning must not be construed as a bleak form of work, but as a valuable and rewarding activity in its own right. If vocational (or any other) education becomes merely instrumental and has as its sole ambition to copy activities in other activity systems, its role in society will rapidly diminish*. (pp. 317–318)

Since the launch of SkillsFuture in 2014 (www.skillsfuture.sg), there has been a concerted effort to refocus energies and efforts within the CET sector to reshape workplace learning and harness technology-enabled learning. The new policy directions of SkillsFuture, rapidly changing global trends, and multiple economies within a nation and a region point to the need for the "flourishing of different pathways" (Ong Ye Kung, 2015), moving well beyond basic skillsets, defined as tasks common to many competency-based training frameworks. Dumont, Istance and Benavides (2010, p. 20) note "that traditional educational approaches are insufficient." Rather, what is required for citizens to navigate their journeys in today's world is a curriculum that builds on and develops learners' ability for continuous learning. Mr Ong Ye Kung, Acting Minister for Education, echoes Dumont et al.'s observation in his comment that the past Singaporean education system "was top down, functional, efficient and some say, utilitarian"; going forward, he cited the vision of a "flourishing of different pathways" to develop the talents of the workforce (*Straits Times*, 7 October 2015, p. A1). These new directions require different approaches to and different understandings of curriculum design.

Critical for CET practitioners are questions on how the CET system and the corresponding curricular approaches and models will be transformed, and on the professionalisation of the CET sector to manage these changes. Our findings suggest that the IDeA Model can be a useful tool to enable this change.

[1] This model of curriculum development was first developed by Peter Rushbrook (see Bound, Rushbrook & Sivalingham, 2013).

1.2 Objective of the research project

This project seeks to further refine the IDeA Model by encouraging practitioners to use and respond to the Model. Their responses were used to modify the language and presentation and to validate the Model.

The study 'What is quality curriculum? Programme design, delivery and management in Singapore's diploma in adult and continuing education' (Bound, Rushbrook & Sivalingam, 2013), from which the IDeA Model is drawn, addressed the question 'What is quality curriculum?' The Bound et al. (2013) study was based on interviews with seven international experts and 11 Singapore-based practitioners involved in adult learning design. A clear delineation emerged between the highly fluid and transformative curriculum, as espoused by the international experts, and the instrumental curriculum designed to upskill workers through acquisition of specific skillsets, as described by the Singapore practitioners. By distilling key design parameters from the study, the research team, at that stage led by Dr Peter Rushbrook, developed a curriculum model intended to render visible the underlying 'invisible' assumptions that designers were making when crafting curriculum and courseware.

According to Rushbrook, Bound & Sivalingam (2013a):

> *Our data analysis revealed "invisible" assumptions behind curriculum-making. It is through such visibility or transparency … that curriculum writers are able to reveal and subsequently interrogate their own and stakeholders' core ideas, values and intentions before enacting curriculum writing projects that clearly articulate shared purposes and outcomes.* (p. 1)

It is this ability to interrogate the underlying values and intentions during the curriculum design process that powerfully informs the eventual shape and form of the enacted curriculum. Although the choice of educational philosophy impacts the curricular emphasis and teaching methods, not all practitioners are aware of or can name the philosophy or theory they are adopting (Choy, 2013; McKay, 2009). This lack of awareness implies that the practitioner may not fully grasp the complexities of curriculum design. The assumption that curriculum designers are able to pinpoint their own education beliefs needs to be questioned, especially when their practice is heavily influenced by their choice of learning theory/ies. Professional development in the area of facilitating a process to effect self-discovery experiences and self-regulation for the designers may be important in developing such awareness. A means to facilitate the uncovering of these underlying assumptions and values is through self-reflection (Brookfield, 1995); the IDeA curriculum model is a tool to facilitate this reflection process, provoking conscious reflection on key assumptions that inform curriculum design.

1.3 Defining 'curriculum'

Over 40 years ago, Rule (1973) claimed there were 119 definitions of 'curriculum', indicating that curriculum is a contested field of educational inquiry. Curriculum is commonly considered to be (see Posner, 1995, p. 11):

- scope and sequence: the depiction of curriculum as a matrix of objectives;

- syllabus: a plan for an entire course, typically including rationale, topics, resources and evaluation;
- content outline: a list of topics covered, organised in outline form;
- textbooks: instructional materials used as a guide for classroom instruction;
- course of study: a series of courses that the student must complete;
- planned experiences: all experiences students have that are planned by the school, whether academic, athletic, emotional or social.

This list indicates a combination of emphasis on what has to be achieved, content covered and, in the final bullet point, learning experiences planned by others for learners. A more recent, expanded understanding identifies curriculum as the relationship between knowledge and social/political control (Goodson, 1997, p. 24); curriculum is "an instrument that not only support[s] ordered instruction delivered by teachers and followed by learners, but also promote[s] different conceptions of social order" (Hamilton & Weiner, 2003, p. 624). A more recent study (Hökkä, Eteläpelto & Rasku-Puttonen, 2010) also acknowledges this concept of curriculum serving the purposes of society and embedding within it dominant ideas and ways of thinking and being.

However, practitioners do not necessarily separate the curriculum as an overarching document from the day-to-day activity of teaching their learners (Fraser & Bosanquet, 2006). Closer to the concerns of many facilitators of learning is Slattery's approach to 'curriculum'; he takes us back to the Latin origins of the term, 'currere':

> *Currere is derived from the Latin infinitive verb that means "to run the racecourse". Curriculum is a verb, an activity, or "an inward journey".* (Slattery, 1995, p. 56)

This explanation stresses that curriculum is a process, not a set of documents or a product. In this sense, it is perhaps closer to Bruner's (1968) concept of curriculum as a process of meaning-making, working from where the learner is, and Doll's (2004) emphasis on what we do in curriculum through dialogue, interpretations, pattern playing, hypotheses generation and narration as key vehicles for meaning-making. In these conceptualisations of curriculum, the *learning* journey is paramount in bringing us to an understanding of curriculum as that which is played out in the learning environment and in the interactions between learners and teacher. This is considered to be the "enacted curriculum". Alexander (2008) suggests that curriculum is "probably best viewed as a series of translations, transpositions and transformations from its initial status as published statutory requirements or non-statutory guidance" (p. 14). These explanations tell us that curriculum is dynamic and that what the original designers and developers produced as a product required to be followed, or to be used as guidance, is not what is enacted in the classroom. Even when a curriculum is mandated and required to be followed, "teaching is always an act of transformation" (p. 14). However, the degree of transformation varies. External assessment, for example, in practice often means teachers teach to the assessment, minimising transformation of the stipulated curriculum.

So, on the one hand, we have instrumental, pragmatic perspectives of what curriculum is and, on the other hand, there are deeper conceptualisations of curriculum that note its purpose (implicit or explicit) as a tool for reproducing dominant ideas, ways of thinking and being, an emphasis on the learners, questions about the roles of teachers and learners, and the ways in which learning and content can be scaffolded.

In competency-based training, the instrumentalist perspective, as Billett (2003) points out, is dominant. He notes that curriculum frameworks for vocational education in Western countries are premised on behavioural accounts of the goals and processes of learning, which guide the assessment of measurable outcomes. Outcomes such as these offer a sense of security, safety and protection for those who manage vocational education, industry and government (Billett, 2003, p. 7). Competency-based training emphasises consistency as being important. In some settings, this can also mean that everyone receives the same learning experience to reach the outcomes, no matter how different the settings and groups of learners. The approach with this understanding is that a curriculum is a fixed document, indicating that learners' needs remain the same from one group to another and from one context to another. Curriculum development becomes not so much about the evolution of documentation and learner development but only the enactment of the stipulated curriculum documentation of teaching to a group of learners. The idea of curriculum as a tangible object takes away a dynamic focus on the learner and learning on the journey.

Nevertheless, it is important to remember the range of contributions to our understanding of curricula and what should be said when we are attempting to analyse curriculum documentation and evidence of the lived curriculum. These contributions include:

- the reproduction of dominant ideas to meet societal needs (Goodson, 1997; Hamilton & Weiner, 2003; Hökkä et al., 2010);
- (normative) documents that set out content, learning process, assessment and evaluation (Cornford, 1999), place, duration and learning outcomes (Cedefop, 2010);
- the provision for evaluation (Cornford, 1999; Jonnaert et al., 2007);
- scaffolding and building of knowledge (Bruner, 1968);
- making meaning (Bruner, 1968) through dialogue, interpretations, pattern playing, hypotheses generation and narration (Doll, 2004); and
- a journey (Slattery, 1995) of learning.

As Posner (1995) points out, selection and adaptation of curriculum require an analysis of its underlying assumptions, as well as its suitability for the particular group(s) of learners and the cultural and geographic region. These assumptions consist of tacit beliefs about the purpose of education, about the intended audience, about the way people learn, about teachers and the best ways to teach, about the subject matter and how it should be organised, and about the community and what it values (Posner, 1995, p. 21).

1.4 The IDeA Model

The results from the earlier study by Bound et al. (2013) reveal two forms of curriculum – 'interpretive' and 'technocratic' (which we subsequently renamed 'instrumental'). The placement of the 'interpretive' label at one extreme of the continuum represents a conception of curriculum as a flexible, dynamic and engaging map of learning possibilities guided by a consistent philosophy of learning. Within this interpretive approach, there is a tendency to favour an active relationship between the learner and the facilitator; the learner is to be respected for his or her choices in education as a lifelong journey, and the facilitator is encouraged to view the curriculum as a lens through which to exercise professional judgement and innovation.

The placement of the 'instrumental' label at the other extreme of the continuum represents the opposing beliefs to the 'interpretive' category. At this end of the continuum, foremost to be considered are the practicalities of working within a highly managed environment, where curriculum is defined in instrumentalist and pragmatic ways. As such, more often than not, curriculum is considered purposive and directed to the skill development needs of the nation: there is a clear market orientation, often implied, towards employers, stakeholders and learners. Curriculum is also expressed as a series of measurable outcomes (through competency-based training) indicative of the requirements of work.

Each of the dimensions of the IDeA Model are considered along this continuum of interpretive at one end and instrumental at the other end.

1.4.1 Dimensions of the IDeA Model

The Model (see Figure 1.1) can be used at the level of the organisation, unit or individual curriculum design practice. Using the IDeA Model heuristic (see Appendix 1), along the 'interpretive' and 'instrumental' continuum, users can identify and name their beliefs and assumptions in relation to each of the dimensions. In so doing, users, together with their design team members and senior management, will have opportunities to ask deep questions and surface their assumptions on decisions about:

- curriculum philosophy, including pedagogical beliefs and practices;
- the purpose of the programme/course and whose purposes the programme/course serves, including graduate outcomes;
- curriculum design and implementation, including delivery choices (e.g. classroom, e-learning, workplace learning), ways in which learning is facilitated and assessment approaches and strategies, what the practitioner believes learning is and how learning takes place;
- evaluation strategies and processes.

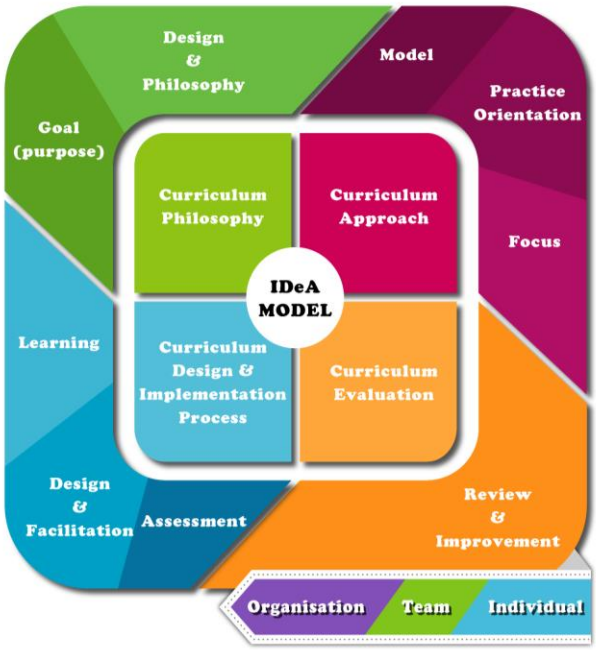


Figure 1.1: Diagram of dimensions of IDeA Model.

The following chapter describes the dimensions and their characteristics in detail, as well as how these characteristics differ from each other along the 'interpretive' and 'instrumental' continuum. While it may be possible to have other types of curricula besides these two, the research studies by Bound et al. (2013) and Rushbrook et al. (2013a) seem to indicate the prevalence of 'interpretive' and 'instrumental' curricula in the Singapore CET landscape. This is corroborated by findings from this project.

1.5 Methodology

As indicated above, the objective of this research project is to refine and validate the IDeA Model; to determine whether or not practitioners find it a useful tool and what changes are needed to make it readily accessible and useable.

We undertook this research project using a simple qualitative design whereby participants used the Model by completing the heuristic (see Appendix 1) and then engaged in a reflective discussion with the researcher on their experience of using the Model, their suggestions for improving the Model, its perceived value and potential applications. We conducted semi-structured interviews (see Appendix 2 for interview questions) with 30 participants, who were drawn from different sectors in the CET landscape. They possessed a wide range of experience, from the novice curriculum designer (less than 3 years' experience) to those with more than a decade of curriculum design and review experience. Many were also involved in roles other than curriculum design, such as training management and quality assurance. See Appendix 3 for the demographic profiles of participants with their accompanying experience and background.

Data from the interviews and artefacts (the completed heuristics) were analysed iteratively, using grounded theory approaches (Strauss & Corbin, 1998), until data saturation was reached. This meant

that there were three versions of the heuristic used, with minor modifications to the language in each version and a reorganisation of the philosophy dimension.

Following collection of all 30 interviews, a simple thematic analysis was then used to identify responses to the Model and its heuristic, potential applications and uses. Data were also analysed by reviewing how the experienced and new curriculum designers responded to the Model. There were comments that the IDeA Model may benefit the two categories of experienced and new curriculum designers differently. For example, Macy opined that the IDeA Model was very useful for someone like her who was a novice to curriculum design for adult learners:

> *… especially for new novice curriculum designers where we want to give them a framework, … a structure on how we go about designing … I think this model is very much useful for the new designers like myself.*

By analysing the results for the two groups of practitioners ('experienced' with 3 or more years of experience and 'new' with less than 3 years of experience), there could be different approaches to helping these two groups of practitioners to upskill and professionalise more effectively.

Also following on from suggestions by participants that the Model could be used to map different kinds of curriculum in different systems, an additional analysis was undertaken of the completed heuristic to determine if there were specific differences between WSQ and non-WSQ courses in terms of the dimensions being examined.

A draft report was circulated to the reference group of stakeholders (n=16) made up of participants from CET training organisations, polytechnics, adult educators, the Singapore Workforce Development Agency (WDA)'s Training Partners Development Division (TPDD) and the IAL (see Appendix 3b), who met to discuss the researchers' interpretation of the findings and implications. Their feedback is woven into this report.

Figure 1.2 shows the distribution of these participants across the WSQ and non-WSQ sectors as well as by gender and experience in curriculum design. As the graph shows, there were more experienced practitioners than new practitioners, with a good mix of practitioners from training organisations and a smaller proportion from enterprises, public organisations and regulatory bodies. There was a fairly even distribution of gender among the interviewees: 16 females and 14 males.

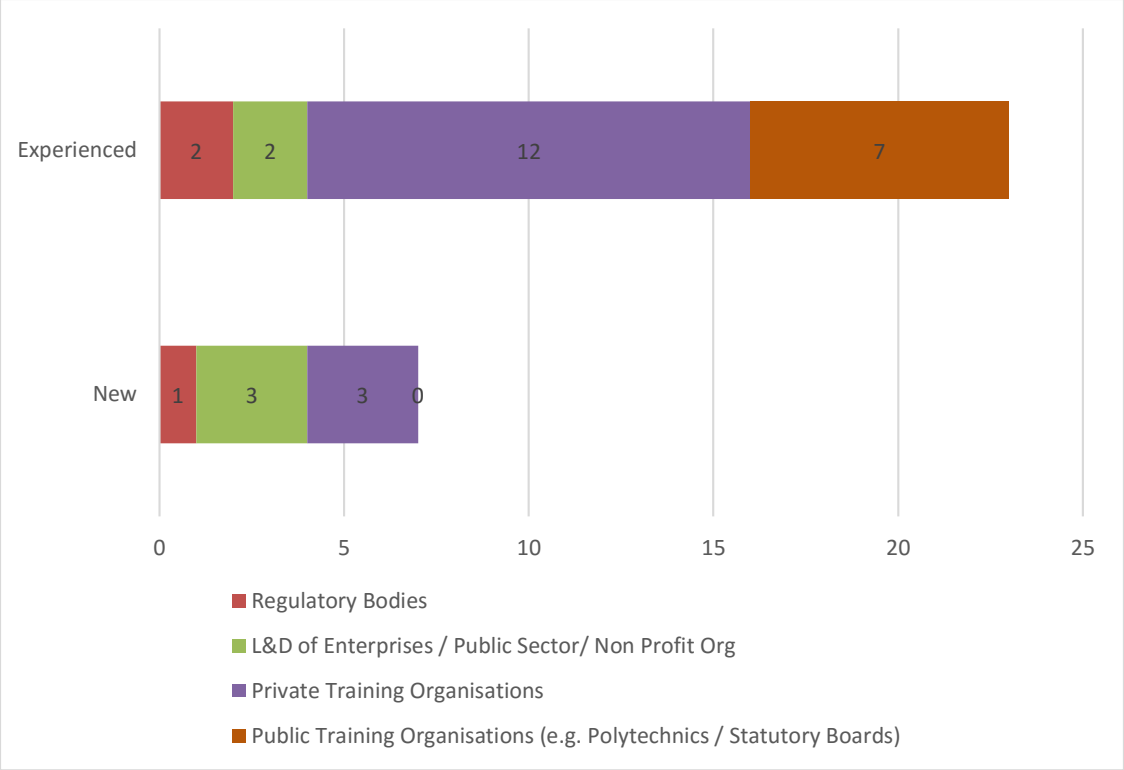


Figure 1.2: Demographics of participants.

New: less than 3 years of curriculum design experience with the understanding that 3 years corresponds to the general cycle of curriculum renewal and the CIR audit.
Experienced: 3 years or more of curriculum design experience.

1.6 Structure of the report

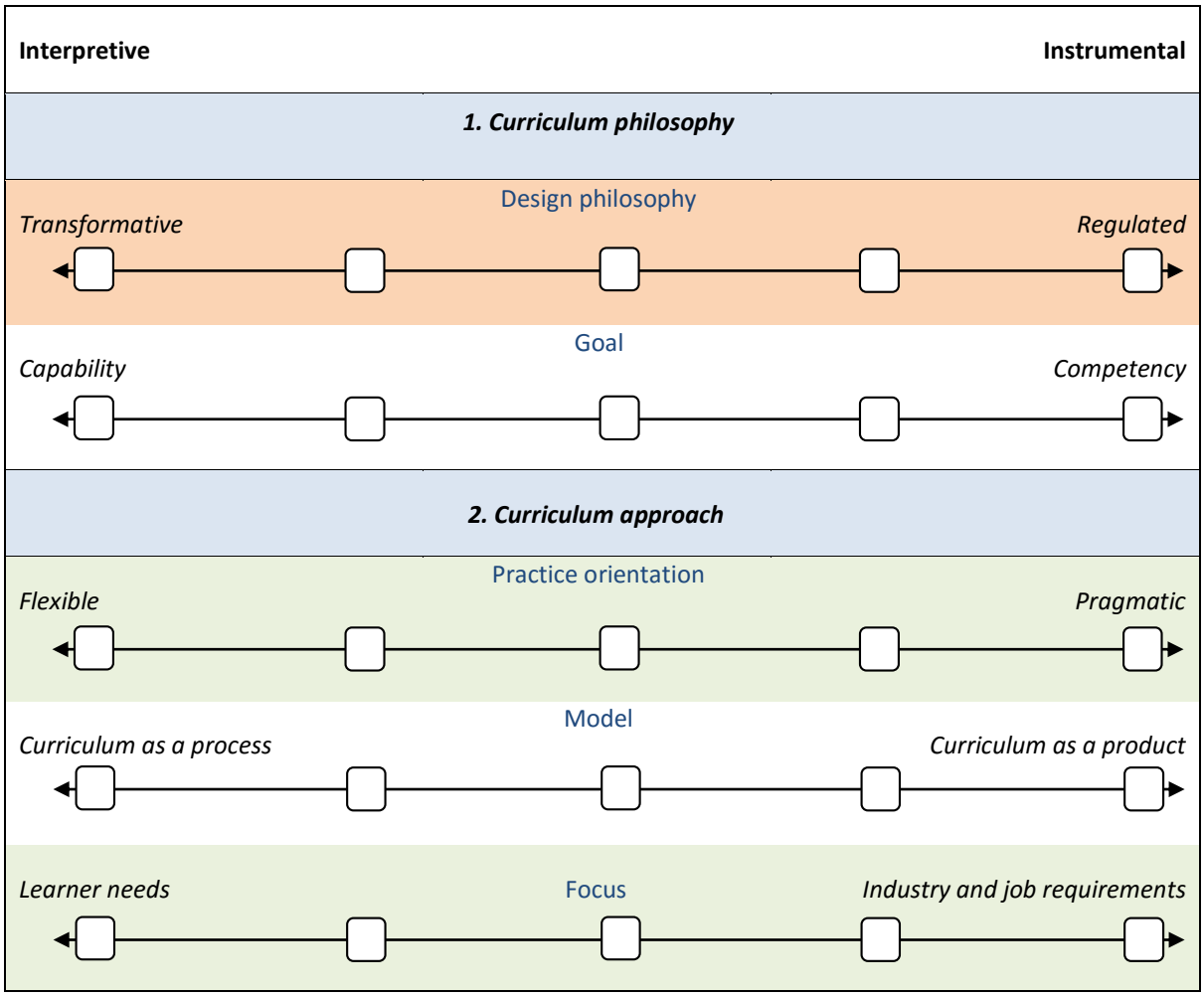
This first chapter has introduced the history and purpose of the project, defined key terms and concepts of curriculum, and introduced the IDeA Model, followed by an outline of the methodology used to undertake the research project. The following chapter gives a detailed explanation of the dimensions of the IDeA Model and the heuristic. Chapter 3 introduces the reader to the findings under the major headings of general overview of the responses to the Model and its use by participants, followed by suggestions on potential applications of the Model, which were far more extensive than the researchers originally envisaged, and in the final section we explore what the use of the Model reveals about curriculum across different systems. The fourth chapter briefly outlines participants' suggestions for what is next for the Model and Chapter 5 concludes the report with recommendations.

CHAPTER 2: THE IDeA MODEL

2.1 Introduction

This chapter explains the different dimensions of the Model in greater detail. Here we present the final version of the model, which was arrived at after conducting interviews with 30 adult educators and analysing their responses. The evolution of the Model during the interviews was largely about finding language that participants could readily understand and connect with. As indicated in the methodology section in Chapter 1, we refined the model iteratively as participants shared their responses to using the Model, providing the researchers with feedback on their interpretations of the language being used, the challenges experienced in interpreting language and so on. The final heuristic presented in Figure 2.1 not only incorporates the outcomes of such feedback, but has also been used by two participants and received very positive responses such as:

> *… the way the model has been designed is very intuitive, which is very important ... when I look at it I know, it's from a spectrum, and the descriptions are clear. So it's, I almost kind of know how to use it, which is I think, a commendation to you and your team who've come out with this… My only request is, get it out quickly.* (Ginny, Director, training provider)



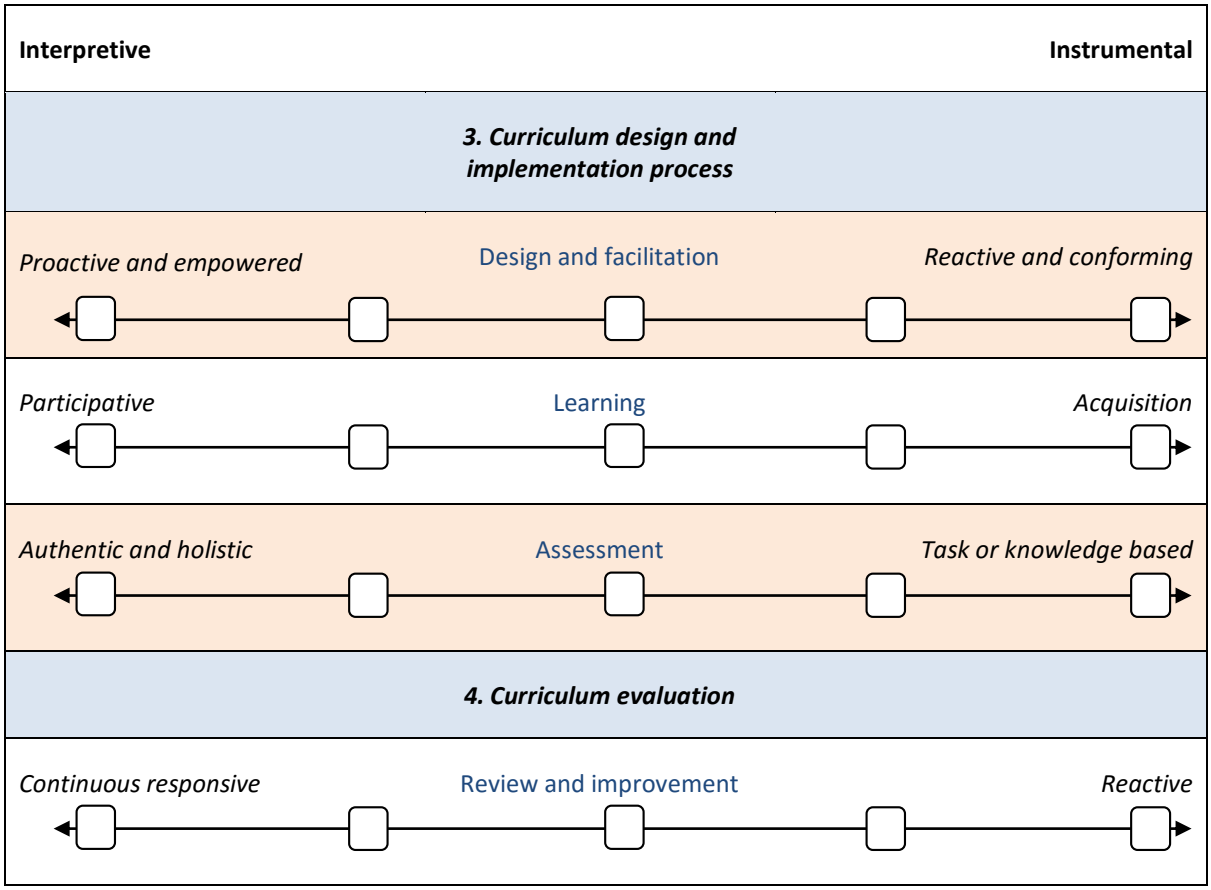


Figure 2.1: Final heuristic of the IDeA Model.

2.2 Dimensions of the IDeA Model

2.2.1 Curriculum philosophy

The differences between interpretive and instrumental curricula are reflected in the philosophical perspectives and beliefs that designers adopt. Different underpinning assumptions of any curricula contain intended and unintended messages to teachers and learners; for example, an instructional, non-flexible curriculum assumes learners learn through acquisition. An interpretive curriculum assumes learning happens through engagement, dialogue and questioning (Doll, 1993). Thus, what is learnt and how it is learnt are interconnected; an interpretive curriculum develops metacognitive skills, 'how to know'; an instructional curriculum produces workers with skills, often separating theory from practice, and rarely develops metacognitive, 'knowing' skills. In these ways, curriculum documentation conveys and reproduces a dominant discourse. What is selected to be taught, how and where it is taught, why it is taught, and how and when it is assessed embody sets of values, ideas about how to make sense of the world and ethical and moral frameworks. As a result, a curriculum privileges some groups and not others.

Interpretive and instrumental

The idea of curriculum as "transformative" [interpretive] signifies an outcome for learners that emphasises fundamental shifts in life and workplace orientations. This could mean, for example, challenging assumptions about the nature of the workplace and one's place within it, the nature of the individual and his or her capacity to influence or shape change, adopting new ways to view the nature of learning, and so on. In many ways a transformative curriculum underpins the broader philosophy of lifelong learning.

The idea of curriculum as "technocratic and instrumental" signifies an outcome for curriculum shaped by the immediate requirements of the economy and workforce skilling. While this is an understandable and justifiable priority for securing a nation's future, there is little within it to offer the learner apart from up-skilling and increased employment opportunities.

Bound et al. (2013, p. 83)

This dualistic model was also highlighted by Sharif and Cho (2015, p. 80), who stated that "instructional designers have taken to focus on either training for the job vs the real-world situation". This discrepancy lies in the way instructional design is taught and is actually practised in real-world situations, with a tendency to focus on designing programmes to meet competency requirements of a job. Competency requirements do not take into consideration the real-world demands that go beyond performing the job tasks (Larson & Lockee, 2009). Possessing adaptability, resilience, creativity and innovation, among other characteristics, is as much a job requirement as the skillsets and knowledge associated with the job within dynamic workplaces and organisational cultures.

2.2.2 Curriculum approach

The curriculum approach comprises three aspects related to design decisions within given settings:

- practice orientation
- curriculum model
- focus.

These three aspects consider the designer or team's depth and range of experience, and the opportunities particular settings afford for different approaches.

Practice orientation

Goodyear and Ellis (2007, p. 340) emphasise "the centrality of students", highlighting that what matters most is what "students actually *do*". A good task design affords the learner the full experience and benefits that come from being engaged in learning during that moment in time.

By infusing flexibility and pragmatism into the curriculum, the trainer may now be given the liberty to adapt the learning tasks to match the needs of the learners undergoing the learning process, within the framework of skill or job requirements. It is this flexibility and structure designed into the curriculum that empowers the trainer in the class to negotiate the learning space and to do what is necessary to make learning happen. However, it is common to find that curriculum flexibility and teacher autonomy – often taken for granted in many educational institutions – are absent in training situations where the curriculum is designed by a master trainer. It is not uncommon to find that instructions are given to the trainer in the class to adhere to the curriculum strictly (Rushbrook et al., 2013a). The liberty to negotiate the learning process with the learners is not one to be taken lightly or for granted and, often, it depends on the level of trust between the institution of learning and the educator in the class, and on the educator being able to adopt the right approach based on sound pedagogical principles to achieve the intended purpose of the curriculum. However, according to Sheehan and Johnson (2012, p. 132):

> *There is relatively little research examining philosophical beliefs and associating them with educational concerns.*

Practice orientation

"Curriculum practice orientation" refers to the manner in which curriculum [developers] ... are permitted or choose to undertake curriculum-making. Choice … is often mediated through the nature of existing bureaucratic and workplace affordances or constraints.

The interpretive approach to curriculum involves, for example:
many activities [being] undertaken through tacit, even unconscious, actions based on prolonged exposure to curriculum theory and practice in a variety of educational settings. This … leads to a seemingly "naturalistic" approach to constructing programmes that calls on a wide and deep repertoire of skills and conceptual frameworks.

The instrumental perspective is:

labelled as "pragmati[c]" for its members' practice-based capacity to respond quickly and competently to the requirements within a regulated regime of other-directed vocational curriculum guidance and compliance.

Bound et al. (2013, p. 82)

These educational concerns may range from fidelity to learning outcomes indicated in the curriculum design to role modelling positive behaviour. While subtle, there are some indications that philosophical beliefs of trainers can affect practice. For example, in the areas of technology adoption, Wells (2007) and McGrail (2005) highlight that classroom teachers' pedagogical beliefs are one of the key reasons behind the lack of technology implementation, despite the availability of equipment. When educators lack belief in the proposed approach, it results in them paying only lip service and not actually implementing the design. The converse is also true. When trainers possess beliefs and values aligned with the pedagogical approach, the curriculum gets implemented *despite* the challenges and barriers. A study by Demirci (2009) on the attitudes of 79 teachers towards the use of the geographic information system (GIS) revealed that, although barriers such as a lack of hardware and software existed, teachers' positive attitudes towards the GIS contributed to the successful integration of the GIS into geography lessons.

Curriculum models

> ***Curriculum models***
>
> An interpretive "curriculum is considered 'dynamic and flexible' and often subject to informed reinterpretation by the facilitator and learners at the point of delivery." The 'process', 'transformative' and 'praxis' models best reflect the interpretive curriculum approach.
>
> An instrumental "curriculum is considered a 'product' to be regulated and remains relatively fixed after being made, including at the point of facilitated delivery."
>
> The instrumental approach best fits "within the 'syllabus' and 'product' models."
>
> Bound et al. (2013)

Good design often draws on multiple curriculum models, of which there are many. Table 2.1 lists the characteristics of a number of curriculum models.

In reality, designers work with many different models in the design and development process. So, while designers and developers may be producing curriculum as a product (Tyler, 1949), within the design of the product they may use an approach that is closer to curriculum as process or as practice, or even as transformative.

Table 2.1: Characteristics of some of the major curriculum models

Model	Authors	Characteristics	Assumptions	Teacher and student roles
Syllabus	Taylor (1979)	A body of knowledge to be transmitted Content focus Textbook approach	Curriculum is a body of knowledge or particular content	Teacher as expert Learner is passive
Product	Tyler (1949)	Sets behavioural objectives Rational, technical Content focus Teacher focus Outcomes/objectives are set Structure of domain knowledge may be	Behaviour can be measured and observed Knowledge is static Assumes direct path between the ends and how the ends will be achieved Programme of activities is primary	Learners have little voice Turns trainers into technicians

Model	Authors	Characteristics	Assumptions	Teacher and student roles
		separate from teaching/learning process and end product Separate from context Rigid power relations Systematic and has organising power		
Process	Stenhouse (1975)	Learning process is the focus Learner focus Knowledge is dynamic	The same outcomes will be achieved differently in different settings and with different learners	Trainers encourage conversations and continually evaluate the process and what they see of the outcomes Learners are meaning-makers
Transformative	Doll (1993), Parker (2003)	Focus on change and questioning of assumptions Knowledge is generated through dialogue, interpretations, pattern playing, hypotheses generation and narration as key vehicles for meaning-making	Knowledge is dynamic and co-constructed Transformation and questioning are necessary for knowledge construction	Teachers and learners construct meaning and knowledge together
Praxis	Grundy (1987), Freire (1972)	Dialogue and negotiation based on the experiences of the learner Confronts real problems Critical thinking Leads to a plan for action	Emancipation, empowerment and collective action	Educators and participants critically reflect, name and plan

Focus

By addressing the question 'Who is the curriculum for?' with a single answer, the curriculum designer is addressing the focus of the curriculum. The answer requires the curriculum-maker to prioritise curriculum stakeholders, while acknowledging there are always multiple stakeholders in any project. The single-answer approach, however, assists in shaping a programme's fundamental orientation.

Those using an interpretive approach make an assumption that places the *learner* at the centre. The assumption is that the learner is an active sense-maker who develops skills, knowledge and theories through the context of their work, education and life-worlds. Another assumption is that skills are developed for maintaining, developing and continuing learning throughout a lifetime, not just for the purposes of obtaining the qualification. As such, employers and society may derive direct and lasting benefit from the learners' educational portfolio but the ultimate beneficiary remains the individual.

Instrumentalists make an assumption that the curriculum is 'for' *industry*, which assumes the enabling of skills, knowledge and theory within individual and collectives for the purpose of building industry competitiveness and subsequently national prosperity. The tendency, however, is to develop skills for immediate industry relevance rather than to prepare for future scenarios of rapid social and industrial

change. This approach, then, tends not to feature such lifelong learning skills as change management, risk-taking, criticism and creativity.

2.2.3 Curriculum design and implementation process

There are three sub-dimensions within this dimension:

- design and facilitation
- learning
- assessment.

Design and facilitation

Where the lesson designer and the facilitator are the same person, this yields tremendous autonomy to the designer to adapt the lesson according to the learning needs of the class. The facilitator is assumed to be an active interpreter of the curriculum within the learning environment. This assumption is based on the idea of a facilitator as an educator and a well-read educational scholar able to make on-the-spot or pre-calculated judgements, often in cooperation with learners, about ways in which to interpret a given learning design based on the situatedness of the learning environment. In many ways, then, curriculum design from an interpretive approach can be said to be 'facilitator-centric', where the facilitator has the power and authority to make professional judgements to develop, change and adapt the curriculum as they perceive the situation demands.

Within an instrumentalist approach, an assumption is made that the curriculum designer and the facilitator will not be the same person, nor will the facilitator be included as part of the design team. There is an assumption, too, that the facilitator is expected to deliver or facilitate the learning precisely as outlined in the learning modules, with minimal space given for interpretation, renegotiation, risk-taking or recontextualisation. As such, professional judgement or reinterpretation of module learning and assessment strategies is not encouraged. In many ways, then, curriculum design from an instrumental approach can be said to be 'designer-centric'. While this arrangement protects the training organisations, it positions facilitators as mere robots, dispensers of information (Mayer, 2005) rather than active co-constructors of knowledge together with the learners. At the same time, the passive model of learners does not seem to sit well with many of our present-day learners.

Learning

According to LeNoue (2011, p. 6):

> *Students today want to participate in the learning process; they look for greater autonomy, connectivity and socio-experiential learning, have a need to control their environments, and are used to instant connectivity and easy access to the staggering amount of content and knowledge available at their fingertips.*

It is this desire on the part of the learners to be active contributors and participants in the learning process that encourages facilitators to reconsider their roles as dispensers of information to architects of learning experiences. As Tapscott (2009, p. 11) remarks:

> *Trainers and educators today will encounter cohorts of learners who have come of age in the presence of the Internet … and are forcing a change in the model of pedagogy, from a teacher-focused approach based on instruction to a student-focused model based on collaboration …*

Malnarich and Lardner (2003, p. 5) observe that simply 'covering' the syllabus leads to surface learning, where the learners acquire information, in comparison with learners participating in the knowledge construction process, which generates deeper learning:

> *… students who equate learning with … coverage … "how much" a student knows, one listens and reads to accumulate details and facts. By contrast, an approach to learning that is qualitative focuses on the deeper meaning and complexities of ideas. The opportunity to challenge students' conceptions and to examine fewer ideas in greater depth from the vantage point of multiple perspectives …*

Learning

Within the interpretive approach, "learners are often considered dialogic learning partners in the construction and implementation of curriculum. They also are privileged over other stakeholders as the end-recipients of the learning programme." Within the instrumental approach, "learners are exposed also to engaging social constructivist pedagogies but within circumscribed content outcomes. In other words, while opportunities abound for participative learning within often-dynamic learning spaces, content outcomes are only those closely matched to prescribed competency outcomes. This produces a paradox of learning opportunity where inflexible content is transmitted through flexible and interactive pedagogical processes. Learners also have a limited role in the curriculum-making process."

Bound et al. (2013, pp. 85–86)

It may appear from the discussion above that instrumental curriculum suffers from attempting to make the learners acquire too much knowledge and at a superficial level. However, it does not have to be necessarily so. According to Soine (2003, p. 41), by setting substantive learning outcomes, learners and facilitators are:

> *… focused on a substantial outcome, not meaningless "tiny tasks" often thought to be associated with the reductionist approach to curriculum design …*

Rutherford-Hemming (2012, p. 133) argues from the constructivist (interpretive) perspective that:

> *… learning is an active … endeavor that includes dialogue, collaborative learning, and cooperative learning … Personal transformation and social transformation involve a cognitive change in the way meaning is constructed ... Here, the individual attaches meaning while experiencing the situation and constructs knowledge …*

Hence, learning in interpretive curriculum is about the learner actively experiencing and making meaning through the experience – a personal journey that the individual learner chooses to embark

on. Therefore, the interpretive curriculum acknowledges that each learner has a different learning autobiography and will 'take' from the learning experiences different things. The learning outcomes are written broadly enough to appreciate this, so capability is developed, but it is understood that this will vary among learners in a given cohort. Interpretive curriculum would be expected to dynamically evolve as the lesson unfolds in order to match the needs of the learners to achieve a deep and enduring transformation in learners. In the instrumental curriculum, the outcomes are predetermined by the stakeholders and often broken into specific tasks, separating performance from 'knowledge', resulting in few opportunities for learning to be holistic and deep.

As Bound et al. (2013, p. 85) note:

> *Quality curriculum should, among other things, challenge and excite its end users – the facilitator and the learner (Schwartz, 2006; Alexander, 2008). It does not achieve this through didacticism and prescribed or imitative content outcomes within a framework of ascribed objectives. Rather, the "intent" should be to encourage learners to engage in dialogic learning that enables creative use of content but then transcends it to facilitate "new" knowledge generation. In other words, dialogic learning encourages creative, critical and innovative thinking, a cornerstone of quality curriculum-making. In some curriculum-making scenarios, learners also play an active role in contributing to the learning design through membership of design teams or stakeholder input consultations.*

Assessment

It follows that different approaches to learning result in different understandings of the purpose and the practices of assessment. Firstly, it is important to begin with establishing the purpose and context of assessment for each type of curricula.

Many of the assessments found in instrumental curriculum are also summative assessments, designed to gauge the learner's observable performance. Summative assessment is sometimes termed "assessment of learning" (Nikto & Brookhart, 2007). It usually occurs at the end of a period of learning or practice, such as at the end of the course, semester or training programme. It is intended to measure learning or performance.

Interpretive curriculum is about transformation of the learner; by using assessments for learning, the approach provides a feedback mechanism to effect this change. Soine (2003, p. 41) clarifies:

> *Formative assessment aims at helping learners/trainees to improve. Sometimes termed "assessment for learning", its focus is on identifying strengths and areas for improvement to enhance learning (Black & William, 1998). It may be used to diagnose performance and to confirm progress in learning. In contrast to summative assessment, formative assessment requires feedback to be given to the learners/trainees, as well as opportunities for the learners/trainees to put that feedback into action.*

Rushbrook et al. (2013a) discovered in their study that designers of instrumental curriculum tend to utilise assessments of learning to evaluate learners' competences at the end of the lesson, and

facilitators of interpretive curriculum adjust their training approach based on feedback from assessing their learners. Besides relying on 'assessment for learning', these facilitators also utilise 'assessment as learning' and 'assessment of learning' as multiple drivers and motivators to help learners focus on critical skillsets and as feedback mechanisms. With 'assessment as learning', learners assess themselves and others using the same set of performance indicators.

According to the Board of Studies, Teaching and Educational Standards NSW (BOSTES, online):

> Assessment for learning*,* assessment as learning *and* assessment of learning *are approaches that can be used individually or together, formally or informally, to gather evidence about student achievement and to improve student learning.*
>
> *The principles of* assessment for learning *and* assessment as learning *strategies have some common elements.* Assessment for learning *and* assessment as learning *incorporate:*
>
> - *self-assessment and peer assessment*
> - *strategies for students to actively monitor and evaluate their own learning*
> - *feedback, together with evidence, to help teachers and students decide whether students are ready for the next phase of learning or whether they need further learning experiences to consolidate their knowledge, understanding and skills.*
>
> Assessment for learning *and* assessment as learning *approaches, in particular, help teachers and students to know if current understanding is a suitable basis for future learning.*

To determine the assessment strategy for a particular piece of curriculum, McKay (2009, p. 1) opines:

> *In simply deciding upon a focus for assessment, however, or on what kinds of information should be gathered for a review, your values have come into play. It is best to recognize this up front, and return to them frequently during the curriculum review process.*

2.2.4 Curriculum evaluation

Designers embark on curriculum evaluation as part of the process to review and improve their design. Some use the terms 'evaluation' and 'assessment' interchangeably; in this report, we are very clear that 'assessment' refers to assessment of learners and their learning. As a result of assessment processes and artefacts, considerable feedback is garnered to feed into an evaluation of a curriculum's design and enactment. McKay (2009, p. 1) notes that evaluation refers "to the making of a judgment about worth or quality". The need to tweak the curriculum on a regular basis has become essential, as Smith, Killen and Knight (2015) reasoned: "Keeping the curriculum responsive to changing demands is essential to any organisation's strategy." Neal (2011, p. 77) put it even more succinctly: "Forget the word 'rework'; think of it as continuous improvement." Likewise, a statement from City University London (Smith, Killen & Knight, 2013) indicated that they have "influenced the periodic review process to be developmental [and] not just an audit".

The ultimate purpose of curriculum evaluation is to benefit stakeholders; the most important of these, we would argue, are the learners. The clearest insight of the quality of the curriculum will stem from moving beyond "listening to students" to recognising and incorporating the contributions of learners "as partners and co-collaborators throughout the design cycle" (Smith et al., 2013).

Getting learners involved begins with having conversations with them. McKay (2009) proposed that designers adopt the perspective of "curriculum development and review as a conversation – with all those groups that have an interest in your course or program – colleagues, administrators, students, graduates, employers, and professional partners – and with your discipline or field".

For example, the eight-stage curriculum design model developed by Smith et al. (2013) has a culture of responsiveness to change incorporated in it as part of the conditions for curriculum design. Despite the clear indications from the literature and the ground with regards to the benefits of a responsive curriculum, the speed and extent of curriculum review and evaluation varies widely across training organisations in Singapore. Many organisations in Singapore are facing a manpower crunch due to the tightening labour pool and, thus, they tend to restrict their major curriculum reviews to once every 2 to 3 years, just prior to the curriculum improvement and review audit conducted by WDA. The other oft-cited reason for infrequent review and evaluation is that training organisations avoid modifying curricula that have been approved and accredited by WDA to avoid the need to send the curricula for re-accreditation and review. Especially in cases where classroom training is misaligned with job requirements, curriculum updates can be frustratingly slow and tedious (Bound & Lin, 2011).

2.3 Conclusion

In conclusion, the IDeA Model is not concerned with details of the practicalities of training needs analyses, funding models, courseware design processes and approvals, pedagogical practices, assessment strategies, evaluation protocols and so on. These can be considered through the curriculum design models currently available in the existing literature. Rather, it emphasises the thought processes and assumptions that both precede and inform these strategies. It should be noted that many of the stated ideas and assumptions found in the IDeA Model are often made unconsciously by individual curriculum-makers. It is the aim of the Model and heuristic to enable curriculum designers and developers to be conscious of and reflect upon their assumptions, with a view to either applying or challenging them when designing or reviewing curriculum. Therefore, it is the express purpose of this research study to determine if the IDeA Model can be used as a tool or framework for curriculum designers to have their own professional conversations to inform practice as well as have those dialogues with other CET professionals to improve the curriculum design process.

CHAPTER 3: WHAT WE FOUND

3.1 Introduction

In this chapter we describe the findings from the 30 interviews conducted individually with the participants and in addition we have included some feedback from the reference group discussion. From the start of the research study, the team endeavoured to test the assumptions behind the Model, rework the terminology and reformat the way in which the Model could be used and interpreted. Our major purpose in conducting this study was to gain feedback on the language used in the Model to ensure it was accessible to everyone, and to also identify its usefulness as a reflective tool. Both these objectives were met. As such, there were four major, and countless other minor, revisions to the Model. While the team is mindful that the Model still needs further improvements, we are cognisant that we have come a long way from the initial stages of the study. The specific details of the modifications are not the subject of this chapter (although we do make some minor mention of participant suggestions) or indeed this report. Rather, in this chapter we share the observations that formed recurring themes in the data. These observations and expected benefits have bearings on various stakeholders in the CET sector, ranging from the individual practitioner to training organisations and the regulators.

There are four major sections in this chapter. We begin with a general overview of the participants' responses to the Model, followed by responses to the structure of the IDeA Model. Next are suggestions on potential applications of the Model, which were far more extensive than the researchers originally envisaged and in the final section we explore what the use of the Model reveals about curriculum across different systems, based on the 30 interviews.

3.2 Perceptions of the IDeA Model

This research study has generated a fair amount of interest and excitement among those involved in the study, including mentions of "getting this Model out quickly because we need it" and "striking a chord" and, from a reference group member, "this is the most exciting thing I have read in years". Practitioners and reference group members were excited because of the potential of the Model and heuristic not only as a reflective tool for deepening individual and collective pedagogical understanding and design of curriculum but also as a tool for more productive and meaningful discussions among stakeholders.

The presentation and organisation of the heuristic based on the IDeA Model was well received. Pin summed it up when she commented:

> *I think it is quite comprehensive because it is about understanding your whole mental model which to me is the philosophy, which of course forms your approach, which would then impact the way you go about the design and implementation, finally the evaluation. So I think it makes a lot of sense to me.*

There were comments about the intuitiveness of the model leading to ease of use.

Pam, an experienced educator, cited the importance of having clear descriptors to define the parameters in the model. She clarified that these parameters provided an anchor for the reflections being made at the individual level and also for what could be discussed or communicated at the team or organisational level:

And I like the descriptors … about the design, the goal … that was very important … or else you get caught up, you get lost … these descriptors were very helpful …

The comments from new curriculum designers were equally positive. Kim made a very clear point on how the IDeA Model would benefit her:

… so we are very clear that this is what we want and then the approach, [on] how it can be done, how it can be developed and then implemented … so it is a very good overview of how content or curricula should look like.

Echoing Kim's comments, Sara commented on the benefit of the IDeA Model as a holistic framework to implement curriculum and courseware design:

… it gives us a clearer direction of where we should head and I think overall it just makes it a lot more holistic in terms of how we approach both curriculum as well as the courseware that we develop.

There were also useful comments on how to improve the Model, especially on specific terminology and how the Model will eventually be implemented. Adeline felt that the term 'economic unit' should not be used to describe the learner, while Sue commented that she was "not too sure like how to use this". Xi, a new curriculum designer at a not-for-profit organisation, was somewhat confused by the term 'philosophy'. This was common across a number of the curriculum designers who had limited experience.

Many of these comments provided useful points of entry to further improve the Model, and the final version has taken into account most of the feedback provided. In summary, the generic comments centred around the Model providing a holistic framework to initiate curriculum design and being intuitive enough for most curriculum designers and educators to use. Some of the more confusing or less acceptable terminology used, as mentioned by the participants cited above, was subsequently replaced and clarified in the final version of the IDeA Model.

In addition to the more generic feedback, there were other specific inputs which addressed critical aspects of the Model and its potential application by users, and these comments will be discussed in the next few sections of this report.

3.3 Responses to the structure of the IDeA Model

While the previous section paints an overall picture of the types of responses given by the participants, this section focuses on how the participants perceived the specific dimensions and subsequent improvements needed. To recapitulate, the IDeA Model comprises four dimensions:

- curriculum philosophy: sub-dimension 'purpose';
- curriculum approach: sub-dimensions 'practice orientation', 'curriculum model' and 'focus';
- curriculum design and implementation: sub-dimensions 'design and facilitation', 'learning' and 'assessment';
- curriculum evaluation.

As the heuristic evolved through the research project and participants encountered different versions, some of their comments pertaining to improvements to specific dimensions and parameters are mentioned as part of the process to improve the Model. Again, at the macro level, participants

appeared to be receptive to the four dimensions found in the Model. There was only one comment – by Ivan, a quality specialist – about considering including the business perspective in curriculum development:

> *… missing from all of this is that the business aspect because a lot of curriculum from training organisations come in is for commercial reasons, is for profit …*

Other than that, the other participants were generally satisfied with the structure of the Model. Described below are some of their comments.

3.3.1 Curriculum philosophy

At the centre of the IDeA Model is curriculum philosophy, as it informs all other decisions; as Ginny, an experienced educator currently performing a senior management role in a large training organisation, commented: "you can't do a curriculum design without understanding the philosophy of curriculum and the approach." Experienced curriculum designers implicitly understood this. Lily, an experienced mentor teacher in a special needs school, opined:

> *Philosophy and approach to me is, because that directs everything else. Your design, if your philosophy and your approach is clear, the design is, it just falls into place.*

New curriculum designers, however, struggled somewhat with this central dimension. Xi, for example, another new designer with less than 3 years' experience, reported: "It's quite confusing like certain, certain words, I mean the philosophy." Halley, a new curriculum designer working for a large training organisation, felt that he could not quite apply curriculum philosophy. He commented that:

> *… I see it as more theoretical, especially the first line … philosophy. The implementation … and evaluation seem to be more doing-based or skills-based but I see the philosophy [dimension] to be a bit more theoretical.*

The difference in understanding this dimension between less experienced and more experienced curriculum designers suggests that new designers may benefit from some form of professional development such as workshops and online resources to assist them in understanding this dimension.

It is an important dimension even outside the model. Such professional development could also then relate to how one's philosophical perspective informs decision-making within curriculum design. The importance of curriculum philosophy in a practical sense was highlighted by Macy, a new curriculum designer:

> *So this model will help us to learn from our peers, our colleagues and also to define where we are as an organisation so that we do it based on what we have decided that this is our philosophy, we will walk in this direction and if there is any deviation, why are we deviating and what can we gain out of that deviation from where we are at.*

And Pin, an experienced curriculum designer:

> *I try to reconcile the need to fit my programme within the WSQ expectations and requirements with my more personal curriculum philosophy which tends to veer a bit more to the interpretative side. So I think it is always trying to draw a balance between the two …*

A number of the newer curriculum designers, with less than 3 years' experience, did not appear to be aware of their curriculum philosophy. This group of participants seems to know the manifested

outcome of their curriculum philosophy, but they are less able to describe or label the philosophy they subscribe to. This creates a number of problems. Firstly, they are unable to communicate the type of curriculum they want to design or want others to design and develop. The absence of terminology or conceptual knowledge to communicate a specific curriculum philosophy and issues results in conversations which lack anchors and hooks that lead to meaningful exchange of information and intent. The response of the less experienced and the more experienced designers is that they perceive the IDeA Model as a tool for addressing this gap by providing a richer base of curriculum-related terminology for deeper communication.

3.3.2 Other dimensions

The dimension of curriculum design and implementation lies at the heart of the multiple decisions a curriculum designer makes as they engage in the design process. Not surprisingly, therefore, this dimension resonates with participants, where they connect more strongly with some sub-dimensions than others. Charles, an experienced designer in a large training organisation, emphasised the need to focus on learners:

> *… the learner as the center of everything … how they want to learn, what they want to learn, why they want to learn, should be the core of the entire process.*

Charles' assertion reflects a philosophical approach closer to the interpretive end of the continuum, driving his learner-centred approach.

Interestingly, no participant mentioned that curriculum evaluation resonated with them. Most treated evaluation as a necessary part of the process. For example, Felix, an experienced educator now in a management role in a public university, explained very clearly how the workflow occurred across the four dimensions:

> *… you start from the belief … the big picture … from philosophy to design to implementation and then to evaluation, which is pretty much aligned with … current theories on curriculum design … it does get people to think more from a belief level, and then … how they should approach design implementation. The direction is correct.*

The sequencing of activities probably made the Model and heuristic intuitive, as designers are familiar with the current design and development process. Tim, an experienced curriculum designer, who provided training and developed curriculum for corporate organisations, commented:

> *… it's organised [from] the top in sequence … Start from the top, and then go down to the deployment and then finally the evaluation … a bit like ADDIE …*

In summary, the participants could relate to most of the four dimensions, although the new designers, with less than 3 years of experience, felt that curriculum philosophy was somewhat abstract and theoretical and, hence, of less application value to them. The similarity in sequence to current design models helped the participants accept the IDeA Model more readily. Having said that, it is important to note that the team did not set out to construct the IDeA Model and heuristic as a design and development model. Yip, a senior regulator, was very firm in stating upfront "… but it is definitely not a model for development". The Model does not claim that the dimensions and the accompanying parameters have to run in sequence; neither does it describe all the necessary requirements for curriculum design and development. In reference to the original intent, the IDeA Model was first

mooted to facilitate professional reflection and development. This intent remains valid, with many participants supporting its use as a tool for professional growth.

What was also interesting for the research team were the other recommendations and inclinations that participants seemed to also have on how the IDeA Model and heuristic could be applied. In the next section, we will discuss the range of suggestions made by the participants in this study.

3.4 Applications of the IDeA Model

There were a number of suggestions on what the IDeA Model could be used for. Some were very ambitious, pushing for national impact, while other suggestions were more muted, relating to individual or team use. Notably, for the individual curriculum designer, facilitating professional reflection is a concrete example of how the IDeA Model can be used. At the team and organisational levels, the IDeA Model was perceived to be a possible tool for facilitating communication and alignment among stakeholders, deepening development of curriculum designers and driving research on design of curricula. Furthermore, some participants cited the IDeA Model and heuristic as a tool to develop a shared understanding among the various stakeholders in the industry, with the potential to streamline and align terminology and deliverables among internal stakeholders such as business development staff, trainers and designers, as well as external stakeholders such as WDA, industry associations and adjunct trainers.

An additional interesting observation was participants' comparison of the IDeA Model with the ADDIE Model (this model has five phases: analysis, design, development, implementation and evaluation), which many curriculum developers seem to be familiar with. Josiah, currently in a senior management position in a training organisation in the construction industry, compared the IDeA Model with the ADDIE Model:

> *… probably IDeA will provide more in-depth [perspectives] into certain attributes in course development which ADDIE itself has not been suggesting it.*

Such comparisons indicate a need to clearly identify the purpose of the IDeA Model not as a tool that sets out a step-by-step approach to curriculum design, as in the ADDIE Model, but as a tool to uncover assumptions being made as designers and developers move iteratively between the different components of curriculum and thus as a tool for dialogue between team members and other stakeholders.

The numerous suggestions are clustered into the eight areas listed below:

1. professional reflection;
2. professional development;
3. curriculum design;
4. curriculum alignment;
5. curriculum profiling and analysis;
6. quality measurement and review;
7. communication between stakeholders;
8. research on curricula.

These suggestions from participants for different uses of the IDeA Model ought to be considered carefully, as the suggestions represent current ground sentiments from new and experienced practitioners in the field, many of whom wield tremendous power and autonomy to drive changes and transformations within their own organisations and industries.

3.4.1 Professional reflection

One of the more interesting observations made during the study was the sometimes stunned look or the apologetic response given after the participants completed the IDeA Model. It was as if a sudden realisation dawned on them. It was also this realisation that forced some of the participants to justify their curriculum profile with reasons attributed to organisational and systemic constraints. Some felt apologetic that they 'sat on the fence' as they ticked several boxes in the middle of the scale. Regardless of the reasons or justifications provided, the IDeA Model appeared to be a powerful tool to trigger self-reflection and subsequently self-improvement and development as users take a step back to reconsider how they approach curriculum design and implementation.

There were different types of professional reflection that participants mentioned during the interviews. Some comments relate to self-reflection to inform practice. For example, Chels, an experienced curriculum designer and trainer, commented that the IDeA Model:

> *… was more like, a mirror … I see this to be very helpful. I think it's important for people to think about what it is that they are doing.*

Sara considered that the IDeA Model was really useful as a tool to be used *during* the process of curriculum design:

> *We are very practical, very pragmatic … I love the fact that when I look at the IDeA Model … there's this spectrum that allows us to rethink [if] we are doing things right.*

Besides reflecting on the process and practice of curriculum design, there is also the possibility of the IDeA Model providing a sounding board for designers to consider where they are currently at and where they want to be as a professional, as suggested by Lily: "It is a model that I think will make a person be very reflective of where you are, and where you want to be."

It is liberating when individuals recognise their professional identity and beliefs, as Pin alluded to in her comment when she justified her slant towards the interpretive end of the scale:

> *… the programmes or learning experiences I have encountered personally which are more impactful for me tend to be more transformative kind … why it shapes how I tend to veer more to the interpretive side.*

As Pin mentioned, her inclination is for transformative curricula because of her own experiences, which have shaped her professional identity. It is likely that professionals can build on their strengths and beliefs to shape their future career, especially when they understand who they have become based on their past. Brookfield (1995) highlights the importance and power of these autobiographical reflexive processes leading to changes in practice. Roland, for example, commented that: "I'm veering more to[wards] interpretive now. I used to be very instrumental."

Besides recognising one's strengths and beliefs, extending the reflection process to recognising the strengths and beliefs of others becomes tenable when one has the terminology to describe them. For example, the comment from Macy, a new designer, was illuminating when she highlighted differences in work practices among team members:

> *I'm just being more aware when I look at the model that there are people, … organisations where designers and facilitators may be the same and they work differently from us.*

The implication of using the IDeA Model to map out different work practices is to empower team members to recognise these differences and utilise the strengths these differences bring. The potential for reducing conflicts and disagreements among team members should also be considered, especially if team members are working on the same piece of curriculum and some form of alignment is critical to achieve a level of consistency in learning experience for the learners.

Beyond the team level, there was a comment that the IDeA Model provided a sense of 'reality check', especially across the training and adult education sector. Darren, who is part of the regulatory body, commented:

> *So just through this checklist [heuristic] or through this model, IDeA model, it just reinforces the fact that whatever that is written here is truly happening.*

Darren refers to the range of philosophical approaches and beliefs to be found in the CET sector – "is truly happening" – providing another point of validation of the Model.

In summary, depending on how the IDeA Model is used, to review one's current professional practice and beliefs or as a dashboard to inform one's future professional development, the outcomes can be rather different. As Halley remarked:

> *… different people will be using different parts of the checklist [heuristic] … for curriculum designers like us, we are probably looking at maybe the design and facilitation and assessment portion.*

Using parts of the heuristic without reference to how, for example, philosophical perspective mediates or drives aspects of curriculum design misses the point of the heuristic and the Model, as each dimension is related to other dimensions. However, to use the heuristic to consider more deeply and closely how design, facilitation and assessment align and are reflective, or not, of the philosophical approach and purpose of a given curriculum indicates the flexibility of the IDeA Model and heuristic. Curriculum designers are likely to adopt the IDeA Model for reflection, in ways which best fit their purposes at different points in time.

3.4.2 Professional development

Self-reflection is an aspect of professional development and learning. Building on self-reflection, participants also spoke of using the heuristic for individual and team profiling as a step to further their own and team's development, as part of deepening understanding of curriculum design and development as well as trajectories.

Tim, who designs and conducts corporate training programmes, made the point:

> *… this tool gives you a quick snapshot. If I have a quick snapshot, then I can know how to build up my dominant strength, and at the same time, be mindful of my weaknesses. So it's good snapshot … as I look at it now.*

This 'snapshot' can be seen as a means of profiling self in terms of preferences along the continuum when designing and developing curriculum, just as it can be used to 'profile' a team's approach and use the responses to establish a dialogue towards alignment among team members, as per Tim's suggestion:

> *… it starts with individual first. So individual got a snapshot, then that's where you link back to your role, either CD [curriculum design], ID [instructional design], FAL [facilitate*

adult learning] and then eventually the teams, because we are managing teams of people, having a common goal to achieve.

The focus on understanding self and others is a prevalent theme that many of the participants in the study highlighted. Tim's reference to identifying weaknesses suggests the potential of the IDeA Model for practitioners to make judgements about areas for further professional development of themselves and their team. For example, a team may find that their philosophy leans more towards the transformative curricula, but that their assessment design is very instrumental, indicating a mal-alignment. This could be an important learning opportunity for the team as they work towards improving alignment.

Besides understanding one's strengths, there were suggestions from the participants to use the IDeA Model to develop designers' and trainers' professional understanding of curricula. For example, Adeline and Rice opined, respectively:

… the trainers in guiding the approach because these talks are about the intention of the curriculum so it would help trainers.

… Can I … adapt some of these to talk to my team about? Maybe I'll have to simplify some of the English … because I do run a little train-the-trainer programme here.

Another example of using the Model and heuristic for professional development is to equip trainers and designers with the skills to carry out critical analysis of curricula. Ginny talked about national-level training for teachers to understand curriculum design and intent:

And I think even for [organisation's name], if we could do this, and use it at national training, it becomes very, very useful. It's critical analysis, … which is … so important.

Participants were taking the Model and heuristic from being a tool for self-reflection and moving beyond this purpose to using it as a tool for individual and team professional development in terms of curriculum design. An aspect of this professional development is using the heuristic and Model to analyse curriculum as a means to initiate dialogue at various levels towards achieving better alignment of the different dimensions of curriculum, as discussed in the following section.

3.4.3 Curriculum design

The idea of using the IDeA Model for curriculum design seemed to resonate greatly with participants. Participants were referring to the upstream process of curriculum framework construction and the subsequent curriculum design prior to the development process. It should be emphasised that there is a fine line between analysis, design and development, as the entire process from analysis to design and development is iterative. Beginning with the curriculum framework, there were participants who indicated that the IDeA Model could be used to inform the construction of the framework. For example, Pam, a senior developer and teacher trainer, recounted her recent experience with developing her organisation's curriculum document:

… we should have read this [IDeA Model] first before we actually crafted something like this [curriculum document] … That's why when I was looking at it, ah, great, it has so many descriptors. So I can imagine if we were to create one, another framework or policy statement, we would use and look at all these descriptors to help us to be more thorough.

From the curriculum framework, we can consider how the IDeA Model can also shape the design process. Sue, currently in a senior management position and an expert with more than two decades of curriculum experience, pointed out that:

> *… as a developer, [the IDeA Model] will help you to set up the plan. Again it's as important as the storyboarding in a way.*

Seemingly, the IDeA Model informs the curriculum plan or design by helping the individual designer consider the various dimensions in a holistic manner during the design process. As Kim pointed out, the IDeA Model allows the "course or curriculum developer to have an overview". A similar impact on the design team can also be achieved. The IDeA Model would seem to positively enhance conversations among designers and developers. Ginny saw the value of the IDeA Model in providing a validated framework for discussions with developers and teachers in the early childhood education sector:

> *… if they were writing a module on, let's say, developmentally appropriate curriculum for young children, then they could talk very scientifically using this IDeA model, of the curriculum that we have, and then implications for practice …*

From the regulator's perspective, Darren articulated the benefit of the IDeA Model in providing the developer with another point of view. According to Darren:

> *… from [the] developer's point of view, if I'm not aware of the situation and after experiencing through the IDeA model and realis[ing] that everything is skewed towards instrumental, then I may reflect to say that, "Should this be the way? Is this what I really want training to be?" So I guess, to a curriculum developer, it may be helpful.*

The same point was echoed by Adeline, who provided the designer's perspective, discussing how informed decisions can be made with regard to the design approach taken:

> *[The heuristic and Model] validates some of the things that we do, so when I look at some of the things, "oh ya" we may not do it but we do consider this when we do our design process.*

The IDeA Model was also identified as a tool for finding the balance between conflicting requirements from different stakeholders. For example, both Pin and Roland were able to locate where in the Model their professional beliefs and what they attempt to do in practice are, even if the contextual constraints may pressure them to behave in a certain manner. Pin explained:

> *I try to reconcile the need to fit my programme within the WSQ expectations and requirements with my personal curriculum philosophy which tends to veer a bit more to the interpretive side. So I think it is always trying to draw a balance between the two.*

Being clear what the curriculum entails before the actual development begins is important to ensure constructive alignment of all curriculum components as well as between team members. The IDeA Model provides designers with the language and dimensions for consideration and deliberation as they design and develop curriculum and for professional growth through reflexive use of the Model.

3.4.4 Curriculum alignment

Constructive alignment during the development phase is critical to ensure the learning outcomes are achieved. Selina was very clear about this requirement, as reflected in her comment:

> *It will help me to actually develop it in a way that [is] more organized … it helps me to actually outline and be more conscious of ... meeting this particular requirement, and at the same time meeting the outcome itself.*

Selina's comment is reflective of the original intent of the Model and heuristic of encouraging designers and developers to think about the different components and stakeholders involved in curriculum, and what the overall intent and direction is.

These different attributes or dimensions in the IDeA Model appear to be important in different ways to individual practitioners. For example, Darren contrasted learner needs with industry requirements. This possible dilemma between learners' needs and the requirements set by the competency standards is not new; rather it is a typical dilemma faced by curriculum designers and developers. Darren's comment on this dilemma was:

> *Because it emphasises more of learning … focuses on the learner as opposed to curriculum meeting the industry requirements, fundamentally it already hit the curriculum developer hard in really reflecting whether am I designing a curriculum just to meet the standard or am I developing the curriculum where my focus is really on the learner.*

As a regulator, Darren is naturally concerned about maintaining industry standards, but here he recognises the struggles and inner conflicts that developers face, especially when industry standards and learners' needs differ. This process of developing the courseware and then reviewing it to check adherence with the competency standards or industry requirements is part of the continual alignment workflow. Roland develops curricula for the information and communications technology sector and is familiar with the iterative process in development. He mentioned that the IDeA Model helped to provide the focus:

> *… to help a few people decide what path to take rather than go off their own track and then have to backtrack completely and redo and waste time. At least they identify where they are headed roughly and then that will give them a little bit more of a focus when it comes to the ID [instructional design] part …*

In summary, the IDeA Model is able to play a role in assisting development work, partly due to the clarity it brings by encouraging the designer/developer to take a wider perspective and consider their own assumptions and those of others. This level of granularity allows developers to articulate what they are doing and thus make visible any possible misalignment between stakeholder purposes, and also between learning outcomes, activities and assessment.

3.4.5 Curriculum profiling and analyses

Curriculum profiling and analyses were not functions that the research team envisaged during the planning process for the research study, but this suggestion came up repeatedly during the interviews with the participants. For example, Charles suggested that the designer could plan the curriculum by determining where on the 'instrumental–interpretive' scale the various dimensions might be located:

> *… for the designer to plan his ID [instructional design], [to] look at which component he can be at interpretive side, which component he can be at instrumental side.*

This is an interesting comment, as for most participants their 'ticks' zigzag across the heuristic. To decide upfront is to potentially fail to engage with the naming of your philosophy and the constraints of particular environments and stakeholders. The responses indicated that, while participants may have a preference, for example, for the interpretive end of the continuum, their interpretation of the realities of the stakeholder and environmental constraints 'drove' them towards the more instrumental end of the continuum, as indicated in the opening paragraph to this chapter.

In setting up an initial curriculum profile, subsequent analyses of the curriculum to confirm or maintain alignment and consistency with the requirements of internal and external stakeholders can now be performed. Ivan, an experienced curriculum quality auditor, commented:

> *… it would only be useful if we are … trying to find the balance … this checklist [heuristic] could be used … for developers to run through so that they ensure that their course is not at the extremes, it's somewhere in the middle, which if that's acceptable to the regulator then it is useful so then everybody has a benchmark – it's not extremely outcome-based, it's also a bit of transformative and that is acceptable. And that's the way they [regulators] want it.*

Ivan appears to be using the IDeA Model in a very functionalist way, which is different from the researchers' original intention. It appears that it is not curriculum philosophy and purpose that are driving his decisions, but pragmatics and a concern for comfortable norms, as is demonstrated in his reference to "that is acceptable". The question needs to be posed: 'acceptable' for what and for who? A regulator's purpose is different from that of an employer or an adult educator or a learner, for example. This potential for the Model to be used in functionalist ways highlights the need for it to be accompanied by the provision of workshops and online resources to ensure its full potential is realised and that it is not misused – a danger in any heuristic, tool or model.

Charles and Ginny identify the potential of the Model for profiling curriculum at the organisational level to establish a curriculum map illustrating the types of curricula that the developer or the organisation has. Charles suggested:

> *… for the developers to check themselves, whether they have a lot of programmes or the courseware towards … [the] interpretive [end].*

This is a quite different potential use of the Model and heuristic from that suggested by Darren. Charles is suggesting individuals (or, for that matter, teams and organisations) could use it to analyse where on the interpretive–instrumental continuum most of their curricula 'sit'. This analysis then becomes (a) a tool for individual reflection on what it means for the individual and (b) a tool for dialogue between the team and provider about what the analysis is telling them: Is it where the organisation or team wants to be? Does it 'fit' with where the organisation wants to be? and so on.

Ginny also saw the potential for using the Model and heuristic in these ways. She excitedly pointed out that her curriculum designers could now use the IDeA Model as a tool to review the many types of curricula that they have, ranging from teacher training to early childhood education:

> *So for adult training … we could pick out some of the important things and talk ... But from a children curriculum perspective, we could use this as analysis. This tool becomes an analysis … so now you see why I'm very excited because finally we have something that I can use from so many perspectives and so many dimensions.*

In summary, the use of the IDeA Model for profiling and analyses can be an exciting development, as it then extends beyond professional reflection and design work to professional development and deeper conversations. What is important is the possibility for the tool to establish curriculum profiles for designers and practitioners, so as to determine the status of their current practice and how they wish to take the curricula they have developed forward. At the organisational level, curriculum managers now have a potential tool which gives an indication of the types of curricula they have under their purview and how they want to redevelop their curricula to meet the future needs of their organisation and learners.

3.4.6 Quality measurement and review

Here we report the ideas mentioned by participants; however, it should be noted that the research team and the reference group considered that using the Model and heuristic as a quality assurance tool and/or for audits was not an appropriate use for the tool. In fact, such uses work against the intent of the Model and heuristic to create reflection and dialogue. The intent is *not* to measure in any way.

Charles posited that quality assurance auditors "can use the tools to review developed courseware … could be internal audit, external auditors". For internal auditors, the IDeA Model could be used to perform three functions, according to Kim. As a new curriculum manager, Kim envisaged the tool for:

> *… three things. One is a guide, one is quality check and also refinement in future … the model helps in terms of [checking] … which part, which area that we need to redesign or refine …*

Suggestions such as which areas to redesign or define based on completing the heuristic can be problematic, but also have rich potential. First, different people will look at the same curriculum and place responses in different parts of the continuum from others. The value of this is that it is these differences that create the potential for dialogue: rich conversations about intent, philosophy, justifications of why 'this' and not 'that', and so on. This aligns with the intent of the IDeA Model and heuristic. As indicated above, what does not align with the original intent is to use it for quality checks, as suggested by Kim. Again, this highlights the need for supportive materials and workshops to enable potential uses to make the most of the tool.

Ginny provided detailed steps of how the IDeA Model could assist the quality review process:

> *… if we go through the curriculum design process, there is the planning, the doing, and the review … when we go down and … audit our trainers ... because the [lesson] outline is just an outline but actually how do they carry it through? This [IDeA Model] is also something we can use and then it provides a very clear accountability ... [We can check if the trainers] ask facilitative questions … What's the philosophy behind it? And this could provide the overview.*

Perhaps the interesting contribution here is that the Model and the descriptors provide ideas for and prompt the framing of particular questions in identifying differences between the original curriculum

design and development and the enacted curriculum. Again, when used in this way, the Model and heuristic become a tool for dialogue. When Ginny asks "What's the philosophy behind it?" she is implicitly asking facilitators to reflect on their approaches and to name them. Such conversations highlight where there is overlap and shared understanding and intent, and where there are differences. The differences then become rich sources of learning and development as deeper shared understanding (and possibly alignment) is sought.

Darren commented that the IDeA Model can provide data to better inform the regulators involved about the focus of the curriculum, rather than just to meet requirements and standards:

> *… the auditor will then be able to better inform if this curriculum whether is it developed more towards meeting the regulatory requirement for the sake of meeting it or really designing it on the basis of really targeting at the learning core.*

It is one thing to use the tool as an auditing tool, which, as we discussed above, is *not* the purpose of the Model and heuristic; it is another to use it as appears to be suggested here, namely that auditors are educated to become familiar with it, the language of pedagogy and different theoretical and philosophical approaches to learning and teaching (and thus design and development). With this knowledge, auditors are then equipped to engage in meaningful conversations with providers. The key role of auditors in the development of the CET sector is referred to by Yip, a retired regulator:

> *And the people who are at key points, like for example, the auditors who accredit, these are key points because if you may do a lot of things to improve the capability, then they come [to] every check point, they say "cannot".*

This observation suggests, if we want to develop the CET sector's capability in curriculum development, we need to educate the auditors (or change their role).

Sue, who was from a CET centre, remarked:

> *In 2009 WDA did give some checklist to us, so … if you can have a more consolidated checklist … like curriculum review checklist … this can be a part of it and if you can send to every, [or] most of your ATOs [approved training organisations] and CET centres, that's important … as learning for everybody and then again, WDA can ensure that even practices are taken care [of] by all the ATOs and CETs.*

Again, the intent behind Sue's suggestion needs to be uncovered. If we focus on her comment "as learning for everybody" and her point about practices across the CET sector being more "even" as a result of that learning, then indeed the IDeA Model and heuristic are a tool for developing knowledge and capability in the CET sector (and some participants suggest other educational sectors as well).

Charles, who was involved in a training and design function in a public institution, had similarly considered the Model and heuristic to have potential to develop the sector:

> *WDA also gives you a checklist for your internal audit before you send your courseware to the WDA for accreditation … So this can become that kind of checklist because … the funders and the accreditation bodies also need to practise … there's no value of having only one CET centre using all the best practices … but if you inculcate this into all your system then automatically all the whole CET environment move to this direction.*

Ginny suggests a dynamic approach to developing capability within a provider and potentially across the CET sector by suggesting that auditors be engaged in a dynamic manner to improve the curriculum review process. She commented:

> *because WDA and ECDA come to audit us very often, every 3 years, this is something we could look at … based on the evaluation we get from the students, based on our audit of what we observe with the faculties on your written documents, is there a need to shift the continuum [based on the IDeA Model]? Then, it becomes [a] dynamic curriculum review.*

Ginny's suggestion is revolutionary, because her approach empowers the regulators and the training providers to become active agents in the review and improvement process. The negotiation takes place within the context of enhanced terminology and understanding with regard to curriculum design and quality, furthering the degree of illumination for both parties, thereby providing more levers for change.

Going further, one participant proposed using the IDeA Model to review our national frameworks. While other participants have alluded to using the Model to enhance communications with national regulators, Ginny was the only one who was explicit in stating upfront the possibility of the IDeA Model providing the frame for curriculum review with the 'hooks' (meaning the dimensions and concepts) to assist regulators to concretise what the national frameworks really mean on the ground. In her own words, Ginny elaborated:

> *EYDF [Early Years Development Framework] is so loose … Then you look at it and it's like, huh what do I do? … but it [IDeA Model] has what I call "hooks" for you to hang on to and say, okay I can run with this, I know what to do with this [IDeA Model] … In my work, we're going to unpack the EYDF because it was so loose that nobody knows how to use it in that sense … it [IDeA Model] can become a tool when we are looking at our national frameworks … that helps to uplift the professionalism and quality of early childhood educators.*

In summary, it is important to keep to the original intent of the IDeA Model, that is, as a reflection and communication tool. The important contribution of the data above is that participants are suggesting the tool can be used beyond the individual, team or provider. If key stakeholders, such as those responsible for quality assurance in a system and for auditing, are educated in the Model, they are then equipped to engage in meaningful conversations with providers about their curriculum. Such engagement is not about measurement or approving or not approving a curriculum, but about what lies behind the curriculum design and if it aligns with the intent of different stakeholders and why there may be differences. The power of the IDeA Model as a communication tool is conveyed in the next section.

3.4.7 Communication between stakeholders

In this section, we will focus specifically on the role of the IDeA Model in facilitating communication and alignment, especially to iron out issues which may not be easy to resolve. This is where the IDeA Model seems to add value, since sensitive and complex concepts may be clarified using the terms

described in the IDeA Model. The Model may also play a role in clarifying curriculum designs at the onset before any miscommunications or complications arise among the stakeholders.

Internal and external stakeholders who may benefit from conversing using the IDeA Model include:

- clients
- developers
- adult educators
- management.

Achieving clarity with all four groups is important, as miscommunication can impact business processes and efficiency and result in unnecessary disruptions or, worse still, unhappy staff and clients.

Clients

To begin with engaging in meaningful conversations with the client(s) is an important start to the curriculum development process, since training needs and programme outcomes are ascertained during these engagement sessions. Getting these needs and outcomes mapped out is critical to ensure client satisfaction and reduce the need for reworking of curricula later on. For example, Charles was very clear that he could use the IDeA Model to facilitate his conversations with clients, especially to document what the client wanted:

> *So in using that WSQ module as the vehicle or the client's purpose we may then be caught in trying to hold true to the philosophy while having to operationalize it on the other hand … it helps to clarify thinking. So I can use this to work with the client and say that okay, for example that philosophy-wise you are here [pointing to the philosophy scale on the IDeA Model] … Come to approach, you appear to prefer this, but [when it] comes to implementation, it's here … But the more times we switch sides then I think we need to know that there are certain things that are … not going to be optimised so, to some extent, then this may be a useful document for that combination.*

Some form of client education may also be needed to align expectations and the eventual outcomes from the curriculum design and training process. Charles continued his point about using the IDeA Model to provide a good indication of the type of curriculum he could be discussing with the clients:

> *… apart from curriculum developers who need to know this, often times in our work, see the client needs to know this, what the clients need to know but not all clients may know this, have a good glance of what curriculum is all about.*

Once the alignment with clients has been established, the training needs and programme outcomes can be forwarded to the curriculum designers and developers to proceed with the development work.

Designers and developers

The ability to communicate meaningfully with different stakeholders requires the language to name different practices, approaches and perspectives. Pin, for example, valued the language the Model and heuristic provided, as these terms allowed her to articulate the processes or the concepts

associated with development, thus furthering her own conceptual understanding of the development skillsets. She remarked:

> *… when I look at this, it gives me the lingo to articulate some of the things that I have been doing which I think is important because only when you can name certain things, will you really be able to take it further.*

Having the language to name and enter into dialogue with self and others about different practices, approaches and perspectives is critical for engagement with stakeholders.

As described earlier, the documentation with the clients is critical for subsequent lead-in to development. Charles described the follow through process as such:

> *It could then be a documentation to record that conversation and that understanding that okay when we actually plunge head-in to develop and to implement the curriculum and subsequently we evaluate that it's that basis why certain things are designed in a certain manner later on … so it's like our TNA [training needs analysis] version of the courseware.*

Tim elaborated on the possible issues arising from misalignment in practice among the developers and the internal team. He commented:

> *… that's the key, aligning the practices. Because if the practices are not aligned, sometimes a lot of roadblocks, then end up spend more energy and resources … So there's a common ground for us to start to communicate and even negotiate … Without this common tool, it's hard … Where's the basis on the ground for all these to align? So that's a good use of the tool.*

From the curriculum manager's point of view, Kim could articulate how the IDeA Model aids in the communication with the developer with additions from Macy, highlighting a more effective feedback process with the Model:

> *… it also helps to communicate with the curriculum developer that this is what I want and then it is a very clear [set of] guidelines on how the content of all the curriculum should [be] developed* (Kim).

> *This IDeA model helps me to remind me of the need to work with different people – the facilitators, the business development team and the learners themselves – to be more aware of where they're coming from when they give us feedback …* (Macy).

The various comments made by the participants were illuminating, especially in relation to how curriculum managers and developers need to communicate using a tool such as the IDeA Model to achieve alignment. This shift in curriculum philosophy and approach between instrumental and interpretive would require similar adjustment in teaching and learning approaches from adult educators and learners. This shift would likewise take time and effort to gain traction.

Adult educators

For adult educators the challenge is more in getting buy-in and translating the curriculum design into actual changes in the classroom. Rice mentioned using the IDeA Model to align training consistency and styles. She elaborated:

> *It will further align the training styles … [it] is very hard to ensure consistency because different trainers have different styles. Some are more focused on the attitude … and some of them are more outcome-driven. So this, this track will help to align the trainers' behaviour.*

Communicating with trainers in a more effective manner seems to be a common theme and challenge that designers face. Clarence, a new curriculum designer in a management role, expounded on this challenge:

> *with this IDeA Model in terms of the coming up [with] the programmes, it will allow … clarity as well as the focus, the programme that I design, who am I targeting with and … how to communicate with the trainers or if I'm the trainer, I will know what [is] expected of me … so this model it helps.*

Pin dived further into communicating the intent of the programme to trainers to help them become familiar with the design. She clarified:

> *… as a designer, when I communicate to the adult educators who are delivering the programme, this is useful too because then they can understand the whole intent behind how the curriculum was designed which I think then would hopefully empower them to adapt it with the understanding that they don't deviate from the intent.*

Rice proposed operationalising the Model for aligning the intent of the design with adult educators by inserting a cover page delineating these details to facilitate alignment among her trainers:

> *… for every single course that my trainers are training I can use this as a checklist [sic] [heuristic] for them and … I can actually put this as a front page of this training course and say that let's all have an idea how do we handle this training, what type is it? So whoever opens it [can] roughly align.*

Extending the use of the IDeA Model to trainers and participants in the class, Xi mentioned the possibility of tweaking the Model for trainers and learners to rate the training, if they were able to understand the terminology in the Model. He opined:

> *… after implementation for the trainer it'd be good and … if the audience, the participants are able to understand this, then this can even be a feedback form.*

In summary, the conversations which need to take place among designers, clients, adult educators and potentially learners can occur within the context of the IDeA Model giving the language and concepts to enhance the quality of the discussion and feedback. In so doing, the Model empowers the stakeholders to take action to improve or even shift the organisation's curriculum philosophy in an informed manner, with management's understanding and approval.

Management

If senior management in the organisation is also aligned with the approach adopted by the designers and other personnel on the ground, then the adopted approach will direct other processes such as recruitment and training to ensure the organisation moves in the same direction with regard to the form and shape of how its curriculum and training should be developed. For example, Lily, a senior trainer and developer with a special needs organisation, stated very clearly:

> *… no point in that continuum is it wrong or is it totally right but it's something that as an organisation, we have to … affirm. That means … when we hire, or when new people come in, … we must also be mindful that we do not slide totally off from where we want to go ...*

Subsequently, the tight alignment from senior management right down to the stakeholders on the ground can produce agreement to proceed in the same direction to achieve similar curriculum goals. Josiah elaborated on this point:

> *… beginning with an end in mind, these actually can serve as a very good alignment, … constructive alignment that what is the desired outputs from it, can actually be determined through these dimensions with the stakeholders agreeable at right upfront and then when the course development at this level of appreciation is guided by it, leading to more constructive and positive effects developing through this process.*

Caleb provided a useful insight into how organisations can utilise data generated from the collation of inputs based on the IDeA Model being completed by different individuals within the organisation and determine if the rate of change is meeting the performance indicator expected. Management potentially has a dashboard which can track curriculum changes in terms of training approaches and focus. Caleb commented:

> *… at the organisation level you can still use the checklist [heuristic] but it will be a collation of the data and then the measurement will be different data points, not at the course level. It will be at the how many course it will do to reach to this level, interpretive level so that the collation of all this data, submission of data, will give you some sensing for the organisation to understand … what is the rate of change?*

This is an unexpected insight into the possible use of the Model and heuristic. More consideration needs to be given to the mechanics of using the tool in this way. However, should it prove viable, then the 'big data' generated by different organisations across the sector and also at the national level can be collated for analysis with the potential to inform practice and policy.

A different suggestion on utilising the IDeA Model for informing curriculum development in the early childhood sector came from Ginny (senior management) in a large early childhood training organisation:

> *This becomes very helpful and … I hope … you will present this to ECDA at some point because … it will help ECDA to also understand what curriculum should Singapore have, and I don't think they need to write the curriculum but if they can give us the philosophy and an approach to a Singaporean early childhood curriculum, then leave*

the rest of it to us … MOE [|Ministry of Education] … [wants to] move towards more character building, more values so what does that mean for us? … this [IDeA Model] is very timely.

Ginny added that the IDeA Model was applicable to helping WDA understand how a competency-based curriculum can fit into the early childhood framework. She emphasised:

… because WSQ has a mapping … The CUs [competency units] all go into [instrumental] boxes … But ... this doesn't work at all, how do you do this, can you show us … it [IDeA Model] will now give the WDA people … if early childhood is like this, and your WSQ framework is like this, then how do we marry the two?

… please get this out very soon because there are people who need it … We never had this kind of tool before, so clearly explained ... at least now there's a reference point … there's a point of clarification, of dialoguing … it was never as clear as this.

The call from Ginny highlighted the need for a tool or a model to provide a reference point for dialogue, especially between agencies and training providers. While there are other issues which may complicate the relationship, achieving communication effectiveness through the sharing of a common language is a critical step to establishing the relationship.

3.4.8 Research

Using the Model and heuristic for research purposes was another area that the research team did not quite expect, but this suggestion arose partly because participants could see the value of using the IDeA Model to provide a profile of curriculum or curricula within organisations and across sectors. When correlated with evaluation results, the studies may be able to feed useful data to curriculum designers, management and policy-makers on how different curriculum types may impact learners' learning and performance in tangible and intangible ways. As expounded by Yip, a research practitioner in CET:

That means you see when it comes to curriculum evaluation, the outcome of maybe over a longitudinal study, of curriculum that has been rated, intended to be certain profile. I call it more like a profile of the curriculum. Then when it's being tested, used, implemented and evaluated, whether there is a means of measuring the effectiveness of curriculum. Then, that will be useful as a tool, because then I would not be reflecting in vacuum.

The caveats discussed above about using the Model as a measurement or testing tool apply when considering this quote. However, Yip's point about "because then I would not be reflecting in a vacuum" is an interesting one. Using the tool to identify norms in different parts of the CET sector has pros and cons. The pros are that such understandings let policy-makers and practitioners know what is happening within that sector (e.g. are there dominant curriculum practices from a particular philosophical perspective or is there a range?). The cons are that there is a danger of striving towards the norm rather than being innovative.

Ginny could see from the research perspective how the IDeA Model would benefit her organisation. Here, she is using it as a reflective tool as intended to promote dialogue. She commented:

I'm happy to try this out and then … so coming from a research lens, trying it out and documenting it, and figuring out what worked and what didn't work, I think it becomes very valuable to IAL and to us as well.

In summary, this section has laid out the possible applications of the IDeA Model at the levels of the individual (professional reflection, profiling and training), team (curriculum design, development, profiling, quality measurement), organisation (communication and alignment, and research) and CET sector (review of national frameworks). These applications seem quite wide-ranging when put together and are likely to be adopted based on the needs on the ground. Remembering the original intent of the Model, as a tool to drive professional reflection and development, is critical to ensure that we keep to the spirit of the Model, and this will prevent abuse of the Model for purposes other than its intended ones. At this point in time, more studies are needed to ascertain if the IDeA Model is sufficiently robust for all the potential different applications suggested by participants. The degree of robustness can only be determined after years of trialling and use by the industry. In any case, these suggestions by the practitioners reflect well on the Model and the potential that it displays, even at this nascent stage of development and implementation.

3.5 Using the IDeA Model to map differences in curriculum across systems

As part of the process of gathering participants' feedback, data were collected on how they perceived their own curricula using the IDeA Model, as described in the first chapter. Many also commented on the framework that their organisation operated in (e.g. WSQ, Pre-employment Training [PET]). As these frameworks are governed by different government regulatory bodies (e.g. WDA and Council for Private Education [CPE]), the requirements and approaches adopted to accredit and audit the training programmes differ. It was these comments and the suggestions in the section above that had the research team thinking it would be interesting to explore differences and similarities across different governing frameworks. We need to bear in mind that numbers are small and thus conclusions are pertinent only to the sample. The value of this exercise is that it starts to explore the extent to which the tool is or is not useful in undertaking such activities.

Do note that the heuristics shown will look slightly different, as the IDeA Model underwent changes during the research study, so participants would have completed the most up-to-date heuristic at the point of the interview. In any case, the dimensions remained the same throughout the study and we expect the general perception of the participants towards their own curricula would likewise remain similar.

3.5.1 Mapping differences between WSQ and non-WSQ curricula

It was very telling that many participants have a good sense of what their curriculum philosophy is, especially practitioners with many years of experience. For example, Richard, director of a learning and development unit in a listed company, cited his dilemma when operating in the WSQ environment with regard to how he would expect his eventual curricula to look like under the WSQ framework:

So when I was looking at this framework I was also torn because if I talk about WSQ then pretty much a lot of things on the right-hand side [instrumental]. If I look at non-WSQ … Then, I'm already starting on the left-hand side [interpretive] of the spectrum.

This feeling of being "torn" was especially acute for Richard and possibly for other training organisations or departments that have just started their journey as new approved training organisations (ATOs) under the WSQ framework. They would have to align their current curricula to

follow the WSQ requirements. Reflecting a similar shift towards the idea of curriculum more as a product was Sara, a director in an ATO that was approved less than 6 months ago. She explained:

> *… as we move more and more into WSQ and I tend to think that over time some of our, quite a bit of our things are going to shift into WSQ anyway, then we become more and more outcomes driven … we used to be very process [and] praxis and [follow] this transformative-type learning but we are gradually shifting into a more competency-based, more product, more outcomes.*

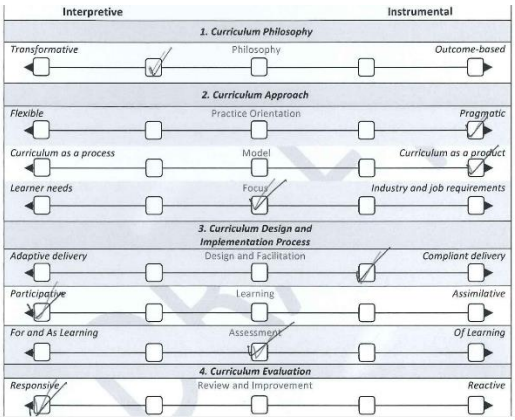


Figure 3.1: Sara.

As reflected in her response, shown in Figure 3.1, a number of the parameters (such as 'practice orientation' and 'model') are very much to the right, under instrumental. Some parameters (such as 'learning' and 'review and improvement') still retain the interpretive features. Sara emphasised that some aspects of their training remained the same as what they had been doing for the past 15 years, even though they were now operating within the WSQ framework:

> *WSQ definitely runs quite differently from how we have traditionally been doing things but the learning outcomes are not very different … the two things that … are different – one would be the fact that we have to adhere to the competency standard so meaning to say if a competency standard has already defined a certain learning unit in a certain manner, we often find that we can't deviate too much even though we feel that something else may be better for that set of learner profile or that kind of a learning outcome that we want to achieve. … The second thing is of course the assessment because for our traditional offering we actually don't assess in that manner but given that WSQ is competency-based and that assessment element comes into play, being a lot more I would say more conscious of that is important when we look at curriculum but whether it's WSQ or our traditional offering, we have always been very outcome-based.*

Sara seemed to indicate that some measure of negotiation and calibration within the organisation is necessary to facilitate the transformations to the design and implementation process. Tim reflected similar sentiments when he worked with training organisations embarking on the WSQ journey. These 'fixed' areas, which are non-negotiable, can be a sticking point for training organisations to manage and navigate. Tim commented further:

> *WSQ [has a] slightly different slant. Why? [When] most people embark [on] WSQ, they've been told or given certain deliverables already, and these deliverables are fixed.*

… we have to just use what is approved, and no, [it is] non-negotiable. So that's the part that saddens me, the [lack of] flexibility of it.

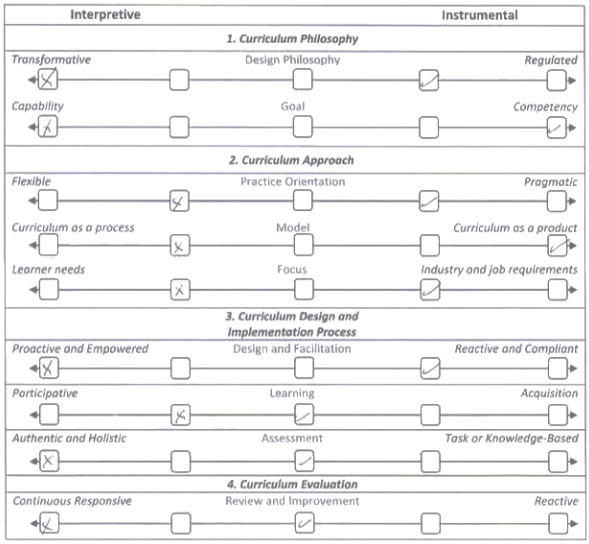


Figure 3.2: Tim.

Refer to Figure 3.2 for Tim's profile of WSQ (ticks) and non-WSQ (crosses) programmes, which clearly shows a slant towards instrumental for WSQ courses. The most notable difference between Tim's WSQ and non-WSQ courses appeared to be 'goal', with 'competency' and 'capability' being the outcomes respectively. There are also notable differences between the two types of curricula across the various parameters. As far as Tim is concerned, he is clear as to how the curricula differ.

However, our interview with Charles, a designer in a large school which provides both WSQ and non-WSQ programmes, had yielded responses which are different and illuminating. He could cite the advantages and disadvantages of being in the WSQ framework. His point about non-WSQ programmes being subjected to additional scrutiny by clients is a valid one. Refer to Figure 3.3 for his profile of WSQ (ticks) and non-WSQ (crosses) programmes, which is not as clear in showing a slant towards instrumental for WSQ courses, unlike that depicted by Tim's curricula profile. Charles commented:

Non-WSQ is actually trickier because it'll probably deviate more … the non-WSQ programme's starting point is usually the client's requirements … to always meet all those requirements, … So the learner's need at the individual level is a lot time subordinated under the organisation as adaptive … it tends to therefore be still … towards the instrumental although … there isn't another requirement such as WSQ requirements, the curriculum designer can afford to move sometimes more towards the interpretive side.

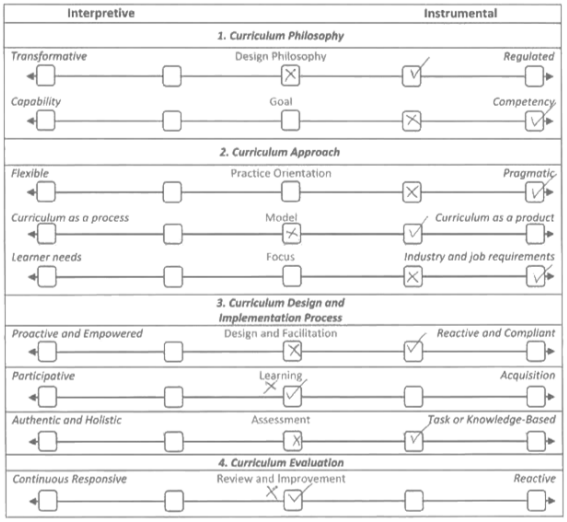


Figure 3.3: Charles.

To a large extent, Charles was profiling programmes which were service-oriented to begin with, and it was likely that most of these courses were less interpretive in nature but tended to focus on developing the competencies of retail or frontline staff in managing customers, for example.

Pin echoed similar sentiments about WSQ programmes being more instrumental in nature. For example, she put it very elegantly when she cited the reasons for WSQ focusing on getting learners to be more employable:

> *… when I know that my end goal is the WSQ programme, … I would veer a bit more to the instrumental portion where my design philosophy would be a bit more regulated and a bit more competency driven … if my starting point is the non-WSQ, then I think I veer a bit considerably more to the interpretive side … WSQ programmes … the whole paradigm of it is very much supposed to help you to be more employable and … the job and industry requirements become very key.*

Pin attributed the slant towards instrumental curriculum for WSQ programmes to job and industry requirements. Linked to these requirements are the competencies that learners are expected to exhibit at work, so leveraging instrumental curriculum to upskill workers is not wrong. Ginny had the same perspective when she made the point about the need to balance education with training:

> *I was very excited to receive information from you because I think this is what we needed at the point when early childhood was adopted, or adopted the WSQ framework … we are very obsessed with competency … which is not wrong but there are certain industries like education that cannot just look at skills and knowledge … other than giving them the skills and knowledge, for example of literacy and numeracy, we need to think about how we impart or sort of, influence the values and also, the attitudes towards learning … it feels we are trying to put a round peg into a square hole because we can't seem to put the attitudes and values into a common competency, for example, because it is not a competency.*

From what Ginny was saying, it would appear that there are grounds to include elements of interpretive curriculum which are more transformative in nature to educate the learner. Ginny made it very clear that the purpose is to be able to describe clearly the point of praxis between instrumental

and interpretive curricula and how they would interface, so that the eventual curriculum can achieve the intended outcomes. Ginny elaborated:

> *So I wish that this IDeA model would have been given to us so that we would know, as we are developing the CU, as we are creating the curriculum, we are very clear actually, which parts fall into what spectrums of the philosophy or the curriculum approach. And that would be a, a very strong case to bring across to people who want to validate the curriculum that we have just developed … the WSQ framework is very regulated, it is competency-based, that's the philosophy. And I think it [IDeA Model] gives us a point of dialogue actually, with the people who have a certain requirement of the way curriculum needs to be written.*

The perception of WSQ curricula being at the instrumental end of the spectrum was cited not just by the industry practitioners, but also by national regulators. For example, Ivan, who used to manage auditors, had similar comments about WSQ courses:

> *… if you're applying to WSQ, … very much everything would lean towards the right, instrumental rather than informative. While you apply it to say, a more academic kind of course, like social sciences or whatever, of course probably everything will lean to the left. So this model is useful if we know what we're trying to apply it to, and it will also be complicated by what the regulator is looking at ... for example you have under WSQ competency-based, they may not be looking very much at interpretive kind of work. And if the designer actually goes into the interpretive kind of work … to the regulator it's not acceptable, changes have to be made and so on.*

Likewise, Darren, a current regulator with a national body, profiled the WSQ Workplace Safety and Health (WSH) curricula as entirely instrumental (see Figure 3.4). According to Darren:

> *WSH ATO with this organisation curriculum philosophy, they will be more to the extreme right for outcome-based, lesser transformative, maybe even lesser dynamic because [it is] very highly regulated.*

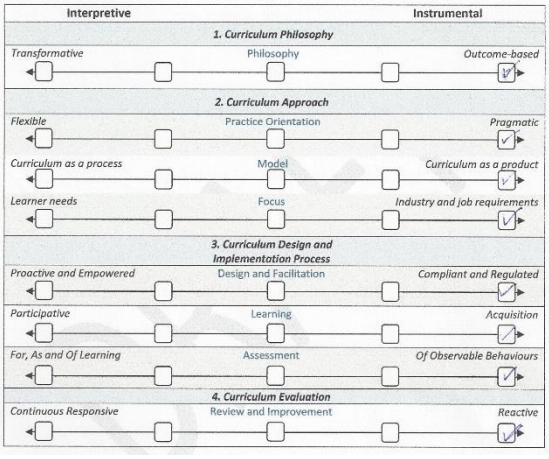


Figure 3.4: Darren.

Clearly participants consider WSQ curricula to be instrumental. The role of the regulator and its auditors, as indicated above, was a recurring theme. Ivan explains:

> *So one of the issue is also how open is the regulator, even if the regulator is open, how open is the regulator's reviewers to this, because they all come with their own*

experience, perspective, their own philosophy and might apply it a bit differently, which is one of the problem we have actually or what WDA has for the past, where there was feedback from the developer of the training organisations that different auditors have different standards, different requirements.

Giving us a bit more insight into this, Ivan continued to explain that there is flexibility with the system and sought to dispel the perception of WSQ being rigid:

… because a lot of people say that WSQ is very rigid, inflexible once you get your course approved, you can't make any changes to it, which is not very true. But that's the perception and practice on the ground, so this would actually give some kind of a comfort to the training providers, the trainers that they can actually be a bit more dynamic.

Perhaps, based on his comments, it sounds like the WSQ system is perceived to be leaning towards outcome-based, with assessments and evaluation processes adhering to fixed indicators, which may be instrumental in nature. This slant towards instrumental curriculum may not sit well with designers and training organisations that would like to have a more interpretive slant, especially if education involves more than competency-building and includes capability development. Ivan went on to elaborate:

… curriculum philosophy is more leaning towards outcome-based rather than transformative, but that is with the perspective of WSQ or competency-based, training assessment which is outcome-based.

What is of interest in the descriptions above is that clearly the Model and heuristic are being used as a communicative tool providing an artefact that enabled participants to name their perceptions of system constraints and possibilities, justifying why their curriculum fits a particular 'profile'. Ginny comments, "And I think it [IDeA Model] gives us a point of dialogue actually, with the people who have a certain requirement of the way curriculum needs to be written." More than a potential mapping tool, the Model becomes a tool to initiate and analyse such dialogues for the purposes of understanding the assumptions of different parties and what the reasons might be for conflict, misunderstandings and lack of change.

While the differences between WSQ and non-WSQ curricula seem obvious based on the IDeA Model, the differences between PET and CET curricula may not be so clear. Take for example, Lily's comments about how curriculum planning for children does not really differ from that for adult training. Her comments were:

Yes, because all these four components or elements are what we also do when we think about curriculum planning for children. Okay, so we always start with our philosophy, the approach, then the design etc. so we do follow this.

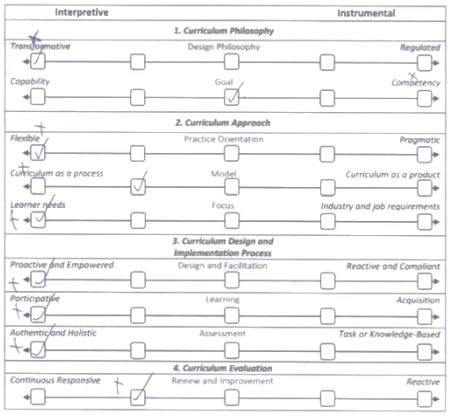


Figure 3.5: Lily.

Referring to Lily's curriculum profile (see Figure 3.5), the ticks represent the profile for teacher training curriculum and the crosses represent the profile for special education. It would appear that, other than 'goal', the remaining parameters are very similar, if not the same. The reason for the difference in 'goal' is that children with special needs will need to focus on acquiring key skills and so this essentially is about building up competencies, whereas special needs teacher education involves both teacher competencies and capabilities, such as being creative, being able to solve problems and having patience. Lily's colleague, Pam, also from the special education school, reflected similar sentiments. She commented:

> *… this [IDeA Model] goes very nice with adult education but I can also apply it for special education.*

Chris's experience with developing CET non-WSQ Specialist Diploma courses for adult trainers and PET courses for students in a polytechnic showed similarities in curriculum philosophy with some variation in responses for 'focus' and 'assessment' parameters. See Figure 3.6 (crosses for PET and ticks for CET). Like Chris's Specialist Diploma programme, the teacher training programmes that both Lily and Pam referred to are also non-WSQ programmes. The contrast would be obvious if we compared WSQ CET curricula with PET curricula. For example, Ginny put it very clearly when she attributed the differences to the curriculum model adopted (curriculum as a product or a process). She said:

> *… the curriculum frameworks that are currently, something we reference, or we are required to reference from, as an early childhood fraternity. The frameworks say that curriculum is process. [Is that] okay? This is the curriculum for young children. But, the way we write the WSQ kind of work is, curriculum is a product. So, how do we gel the both?*

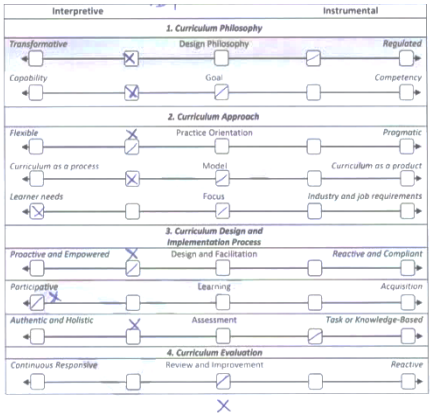


Figure 3.6: Chris.

It is interesting to read the comments from the different stakeholders, especially when they possess different perspectives on the same issues. This section also illustrates how the IDeA Model can potentially be used as a shared tool with common terminology and concepts to drive upgrading or transformation of curricula within national frameworks. In relation to Ginny's suggestion that the IDeA Model be used as a starting point for dialogue with the regulators and other stakeholders, it does bear reminding that dialogue and alignment will move the CET sector forward, for the benefit of our workforce.

The completed profiles from our participants also highlighted different approaches in design between curriculum designed to teach technical skills and curriculum designed to teach other dimensions of development. This is the result of how the purpose of the curriculum is conceptualised and also reflective of how learning outcomes are conceptualised and written. Technical skills standards are often broken down into micro skills, reflected in many criteria or standards to be achieved. This approach inadvertently privileges and values technical skills as a standalone, outside the context of performing such skills, ignoring the complex workplace contexts in which technical skills are applied to identify and solve problems, and are an implicit part of exercising professional or vocational judgement. Such approaches therefore result in a prevalence of behavioural performance indicators to assess learning, characteristic of instrumental curriculum. According to Rice, a learning and development manager with a logistics company:

> *… for the majority of my training which is 70 per cent … it's very extremely on the right side [instrumental] and the other type of training which I explained as the transformational or the development, that soft skills type, they are more like here, this part [on the left].*

Darren made the same observations with regard to WSH curriculum, which is more technical than the service excellence or leadership courses, which are more transformative in nature. He commented:

> *WSH ATO with this organisation curriculum philosophy, they will I think they will be more to the extreme right for outcome-based, lesser transformative, maybe even lesser dynamic because very highly regulated. If you go to say service excellence or LPM in particular say … very transformative, then it will go towards right, to the right. Outcome-based yeah they may even achieve outcome-based also and it's very transformative. So I think it depends on the organisation's own curriculum philosophy.*

Technical skills valued in these ways are tangible and measurable, making them easy to tick off as completed and therefore to meet funding requirements. Rice identifies different types of skills and the different approaches that are sometimes used:

> *… for example for the soft skills training and email writing trainings and the telephone soft skills, we are free to be more flexible, you know and make changes along the way, improvise on the spot and continuing follow up with them as though it's normal everyday conversation … Whereas under product and process training, we really have to be more pragmatic and more outcome driven.*

Likewise, several members in the reference group mentioned the possibility of using the IDeA Model to map their curriculum to understand the characteristics of the specific modules within, for example, a 3-year curriculum, across dimensions such as curriculum philosophy and approach. The manner in which learners transit from one type of curriculum to another also deserves attention, as, often, these

learners struggle to make sense of the learning and the requirements of the curriculum. A case in point concerned students schooled in the sciences, who often found it a challenge when they had to take on humanities subjects, and vice versa. The members of the reference group posited that the underpinning reason could be a change in curriculum philosophy and approach, which resulted in students requiring a change in their approach to learning and assessment when tackling these subjects. It was further mentioned that, with the profiles of these modules on the IDeA continuum, it would inform policy-makers, training managers, curriculum designers and instructors on their roles in translating the intended curriculum to what is enacted in the classroom.

These examples not only highlight expected differences in different disciplinary fields, but also beg the question: to what extent are these differences truly reflective of different types of reasoning across different disciplines and types of skills? Are there approaches that can be used to develop technical capacity that are more holistic? Certainly there is considerable research literature that suggests it is indeed possible to do this (see, for example, Lee, 2015; Stack, 2007).

Using the profiles as snapshots of the perceptions of the participants at the point of the interview, these findings illustrate how the use of the IDeA Model can be used to profile curriculum within different systems to compare the similarities and differences. Given the policy direction for lifelong learning, including the intent for adult learners to move between systems seamlessly, it would appear that the dialogue that has to take place between the various stakeholders across national bodies and agencies and training providers needs to go much deeper, touching on curriculum philosophy, approach and the balance between competency-based training and capability learning to achieve the national outcomes for future-proofing of our workforce.

3.6 Summary

After interviewing 30 curriculum designers, training managers, industry regulators and quality specialists, the overall feedback given was positive, with some enthusiastic requests to "get it out quickly" because it was very much needed in the industry. Roland, one of the participants, wanted to start using it already:

> *I can see myself using it. In fact if you would allow me to, I wouldn't mind doing a bit more, taking this model and applying it a couple of times to different modules or different curriculum that I've developed and send you the results.*

Specifically, the unequivocal response has been to use the IDeA Model as a communication and reflection tool, with the underlying motivation to enrich conversations and discussions, whether internally with oneself or externally with others. According to the reference group members, the power of the model lies in its potential to provide a 'common language' for stakeholders to 'discourse, moderate or calibrate', thereby making conversations more productive and meaningful. The use of the IDeA Model on sectoral and national platforms to enhance communication with key industry stakeholders is not a far-fetched one, given that training and education remain key drivers for national growth and terminologies need to be refreshed and deepened to reflect the complex CET environments that government agencies and industry bodies operate in currently.

Some of these applications point towards use by the practitioner for professional growth and development, while other applications refer to how curriculum is treated and aligned for a better learning experience. In general, the above findings resonated with the reference group.

Though the IDeA Model, being a reflection tool, is not a quality instrument, using the model for quality *review* to check constructive alignment between intended and enacted curriculum could be an interesting application of the IDeA Model. Finally, the IDeA Model would fit very well with a research-oriented focus in CET. For example, findings from research studies on how curriculum types based on the interpretive–instrumental continuum vary across sectors could influence and inform future designs and policies. Understanding the pedagogical beliefs of adult educators on the different types of curriculum on the continuum could also prove to be interesting.

CHAPTER 4: WHAT IS NEXT FOR THE IDeA MODEL?

4.1 Introduction

What has been illuminating to the researchers was the suggestions for possible implementation measures and what is needed to support implementation of the Model. Darren, a novice designer, summed up the need for further support to make sense of the Model. The Model is only the start of the self-awareness and developmental process. He stated:

> *… after I filled this [heuristic], I know where is my, where my perspective is but I'm not sure how is that going to help me.*

As indicated in the previous chapter, experienced curriculum designers readily understood the potential applications of the Model and how to interpret their results. The suggestions made by participants were wide ranging and included measures that could also be useful for experienced practitioners for further development and support. We clustered the suggestions into the following categories:

1. self-help resources
2. training, workshops and facilitated discussions
3. community of practice and ecosystem.

It is useful at this point to remind the reader about the terminology and intent of the IDeA Model. The Model (Figure 1.1) is a diagrammatic representation of the different interconnected and overlapping dimensions, with curriculum philosophy at the centre, as it drives beliefs and assumptions about each of the different dimensions and sub-dimensions and, therefore, decisions made during the design process. The heuristic is the tool where these dimensions and sub-dimensions are set out along a continuum from interpretive to instrumental, with a rating scale provided for each sub-dimension. Clearly it is *not* a checklist; checklists do not have rating scales and are unlikely to provide the opportunity for reflection on assumptions and beliefs. We make this point because the term 'checklist' is used in some of the quotes provided in this report. This misunderstanding can be traced back to some of the language used during interviews. The intent of the Model and its heuristic is as a reflective and communicative tool, as indicated in the previous chapter and in the following discussion of participants' ideas for where to next with the Model and its heuristic.

4.2 Self-help resources

Developing self-help resources targets the development of tools and resources to complement the use of the IDeA Model, to feed into collective activities for professional development and to support design and development teams using the IDeA Model.

Suggestions for self-help resources included providing examples, case studies and manuals mounted on a dedicated portal for practitioners to access the IDeA Model. Leela, an experienced curriculum manager with a training organisation, suggested:

> *… maybe a portal where … your sets of [reflective] questions [are mounted]?*

Felix had similar sentiments that, to drive reflection, users will need additional reflective questions to assist them:

> *… if there are some questions that really get people to think about some of the things that they want to keep and things they want to maybe think about to change, it would be useful …*

In the original conceptualisation of the Model (see Bound et al., 2013), Peter Rushbrook developed a series of questions for each of the dimensions for the purposes of aiding reflection and to use the Model reflexively (see Bound et al., 2013); these could be used as a starting point for developing such sets of questions. In addition to the reflective questions, Halley, a new curriculum designer, requested examples to help make sense of the five-point scale. He proposed the following:

> *… if there were examples I could look at, … like a scale with examples on it, then I will find [the information] myself. I [will] find it easy to understand.*

This was also picked up by Ginny on the interpretation of the rating scale:

> *… in terms of a rating scale, then you must teach us how to use, right? Because what is 1, what is 2, what is 3, what is 4, needs to be kind of like double clicked to be explained …*

At this stage of development, the research team considers having specific definitions or explanations of each of the points along the five-point scale as lessening its value as a tool for dialogue. Indeed it is the lack of these definitions along the continuum that encourages dialogue and explanation. The lack of specific explanation for each box along the continuum also encourages users to practice using pedagogical language (which they may not be familiar with initially) to explore and hence deepen their understanding. What would be useful is to provide examples from different industry sectors and different curriculum contexts (e.g. WSQ, polytechnics, different disciplines etc.) that would provide material for users to see the wide range of potential interpretations and how a completed heuristic may differ in different contexts. It is this latter issue that is also worthy of further research.

Notably, Ginny also commented that there was value in learning from the experiences of curriculum designers in other industries on how they utilise the IDeA Model:

> *… in the appendix of the manual, there may be case studies of how it's done for early childhood, how it's done for different industries … I do see this as very valuable … the way that you do it in your own industry could look slightly different, but it doesn't mean I don't learn from somebody else …*

Charles concurred with Ginny's suggestion for case studies to help anchor the experiences of curriculum designers. His thought was to concretise the two types of curricula (interpretive and instrumental) through these cases:

> *It [the IDeA Model] captures some of the key ideas in a neat manner. At some point if someone needs to operationalize the level with this model, then I'm not sure whether there would be sufficient handles and pointers to guide a person, perhaps a relatively new curriculum developer to operationalize the model … a case study will … [help] reflect the differences at the two ends of this model.*

Over time, the cases cumulatively would present a substantial body of data that may identify differences in different sectors based on different disciplines' knowledge and professional/vocational

identity. Differences across organisations and sectors could potentially be highlighted if there were common patterns. One suggestion from the reference group listed 'sector specific case studies' on the outcomes of 'applying interpretive and instrumental approaches' to curriculum design in these sectors.

Some of the suggestions made by participants are quite specific (e.g. explaining what is meant by the different points on the scale). As pointed out by some members of the reference group, there is an **inherent danger in 'locking down' definitions**. Such an approach would **change the original intent of the heuristic, from a reflective, communicative tool to a checklist**. As such, it would no longer have value in serving as a communicative tool, creating the space for team members, stakeholders and so on to explore what they mean when they place themselves at particular points along the continuum. Rather it would probably become a tool where those who completed it would select what they thought was wanted rather than be a reflection of their own approaches.

4.3 Training, workshops and facilitated discussions

It was clear from the interviews that the IDeA Model requires further unpacking to help the users to make deeper sense of the Model. This was especially so for new curriculum designers, as demonstrated in the previous chapter. Chris had this to say:

> *… you may need to explain to them and … sometimes it's very hard for them to visualise, or if they only have this idea [that] the curriculum is regulated … When you talk about transformative they may say, "huh I've never seen something like that, it's not within my past experience" so they may not be able to accept this.*

The reference group made similar suggestions to leverage the model for a more productive dialogue when coaching novice designers. While it may be difficult to determine the degree of experience required to meaningfully access the model, reference group members considered that new curriculum designers should be familiar with pedagogical jargon and have attempted curriculum design to benefit fully from the use of the IDeA Model. To support the self-reflection and professional development process, additional resources to unpack the implications and impact of each dimension may be needed.

To address these issues of support, there were suggestions that we could formalise the support and develop the materials into a training programme with learning outcomes. Yip proposed:

> *… maybe there should be, besides this model, … a little bit of description of the target group, the learning objectives of that course, all right and then … a certification?*

Likewise, Ginny had similar thoughts on running a course for curriculum designers and practitioners in both PET and CET. She suggested that:

> *IAL will be able to at least run some sort of equipping course for curriculum designers, and I hope it's not just for adult curriculum, but it can also be for children curriculum …*

On where the training could be located, there were also suggestions from IAL adult educators who train for the Advanced Certificate in Training and Assessment (ACTA) and the Diploma in Adult and Continuing Education (DACE) to consider inserting the IDeA Model into certain segments of the DACE programme. For example, Chels proposed segments such as the practicum or the Design Curriculum and Instruction (DCI) module:

… the practicum learner to take this evaluation, maybe he could even do it as a pre and post [practicum] kind of thing … because it sort of opens them up to think about curriculum … [where] practicum learner and the supervisor sit down and they have a … developmental conversation … That would be very good use of this tool … You can also do it in DCI, there is time for that.

The idea of developmental conversations was also picked up by Halley, who felt that facilitated discussions would deepen the reflections and extract greater value from the Model and heuristic. He commented:

I think what is really missing was a discussion … looking at this, it may not be an exercise you want to do alone … you want to do with a group of people … that will probably flesh out more, more issues, better angles ...

Chels also added that a workshop under the Adult Education Network (AEN) could also work:

You can also do as AEN ... we are also targeting those people who have gone through whether it's ACTA or DACE, and then this would be another step-up as part of their continuous professional development.

This was also a suggestion by Yip to have a short workshop for practitioners who have gone through the ACTA or DACE programme. She said:

Maybe a post-DACE … workshop … half a day kind of training … like CPD [continuing professional development].

While it is not clear how much support is needed, the call for some form of support is clear. The type of support is likely to vary based on learner profiles in order for learners to benefit fully from the suite of programmes, from formal training and workshops to facilitated discussions. There were also suggestions for providers to use the Model and heuristic for the professional development of their staff and adjuncts, as proposed by Ginny:

… [IDeA Model] can be further unpacked … in version two, how we use this model, and then use it as a tool for in-class, watching what's happening in class, so that we are actually using this tool as a form of possibly staff development …

Another suggestion by the reference group touched on providers or those who engage curriculum designers using the heuristic to identify the curriculum designer/developer's perspectives on curriculum before engagement of his or her services. By taking the Model and heuristic upstream to the pre-curriculum development stage, training managers may have at their disposal a useful tool to inform the developer selection process.

4.4 Community of practice and ecosystem

Participants also suggested that the IDeA Model and heuristic could be a tool which special interest groups on curriculum design may pick up to drive. Leela mentioned:

… we'll just have a community that … [will] come back and tell us how he or she managed to make use of the features [and the] solutions … made on his job … something like [an] eco-system … We still rely on the community to give us an idea of what's out there, what's already there and how we [can] improve it [IDeA Model].

Likewise, Ginny also shared the same idea of having learning communities and circles to acquire additional knowledge about curriculum design specifically on the IDeA Model:

> *... learning how to use it, and then maybe even having community of practice, professional learning circles coming in to share. It can become very dynamic. I see a lot of possibilities.*

Indeed, there are many possibilities, especially if the industry practitioners and regulators choose to embrace the IDeA Model as part of their dialogue tools. Then, the community of practice coming round to support the IDeA Model can grow to strengthen the practice of curriculum design in Singapore.

4.5 Conclusions

The key areas for support and follow-up work include:

1. Finding a 'home' for the Model to provide the greatest leverage for professionalising the TAE sector.
2. Workshops to take learners through the Model and including the Model as part of DACE.
3. Developing self-help resources to assist users to interpret their responses and drill further into uncovering their assumptions.
4. Developing or tapping into existing communities of practice and ecosystems to share learning from the use of the Model.

In conclusion, the IDeA Model is not concerned with details of the practicalities of training needs analyses, funding models, courseware design processes and approvals, pedagogical practices, assessment strategies, evaluation protocols and so on. Rather, it emphasises the thought processes and assumptions that both precede and inform these strategies. It should be noted that many of the stated assumptions found in the IDeA Model are often made unconsciously by individual curriculum-makers. The aim of the Model is to assist practitioners to make visible their assumptions and, as the participants in the study and the reference group members suggested, to learn the language to "interrogate the curriculum design" and engage in deeper dialogue with themselves and others to improve curriculum design practices.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

Clearly, the IDeA Model created a sense of excitement about possibilities among the participants and many in the reference group. The issue is where to from here? The answers to this question are in many ways addressed in the preceding chapter in terms of ideas and possibilities. However, not all the suggestions from participants are appropriate to the intent of the Model. For this reason it is helpful at this point to give a more nuanced explanation of the purpose of the Model and its heuristic as it might be used.

Given that the Model and its heuristic are a tool for reflection and communication about curriculum assumptions and beliefs, some specific ways in which the tool can be used include:

- A curriculum designer could use it to 'map' the curriculum they have developed and/or been involved in developing. On looking at the different responses for the different curricula, they may be prompted to ask themselves questions such as:
    - Why is there a difference? What role does the context and client play? Does the WSQ system, for example, really 'have' to be like I think it is?
    - Is this more interpretive because the client had a holistic understanding of the outcomes and learner engagement?
    - What do I believe learning is? How do I think leaning happens? What is needed to encourage learning to take place?
    - What do I believe teaching/facilitating is? What are the characteristics of 'good' teaching/facilitating?
    - How do I know learners have learned?
    - Are there ways in which the teacher/facilitator and learner can make judgements about learning along the learning journey rather than at the end?
    - What do I think the role of learner is?
    - What do I think the role of the teacher/facilitator is?
    - How has my experience influenced what I believe and do now?
    - To what extent do I as a designer have interaction with those who enact the curriculum? Why so little (or so much) interaction and does the interaction, or lack of it, influence how I think about curriculum design and development?
    - How can I build the responses of learners, their assessments and teacher/facilitator feedback into constantly adjusting and reviewing the curriculum? Can I create space for this to happen in the way I design and write up the curriculum?

  There are a myriad of questions that can be posed; the above provide just a few examples. Clearly, in considering these matters, it is useful for the individual to have access to a group of

others who are undergoing the same experience and to share ideas, ponderings and thoughts; hence the suggestions for an ecosystem/community of practice by a number of participants.

- The Model and its heuristic might be used (as suggested by participants) at the very beginning of the design process when discussing the purpose of the curriculum and ascertaining its outcomes. This dialogue often takes place between curriculum designer/developer and client. If the intent and approach is not clearly understood in the same way by both parties, then the process can go badly wrong, requiring multiple rewrites. To prevent this from happening, the curriculum designer/developer could work through the heuristic with the client, discussing each dimension and sub-dimension and where along the continuum they are. The dialogue provides an opportunity for reflection in action, with potentially each party encouraging the other to reconsider various aspects as they explore what it means to place themselves at one point, not only for that sub-dimension but for all the dimensions. Thus the final outcome may be quite different from what each party originally had in mind, as they carefully work through the heuristic together.

- The Model and its heuristic can also be used within teams. If, for example, the team includes the curriculum developer/designer and those who teach the curriculum, the designer can use the tool at the beginning of the design process in a similar way to that outlined above. Those who teach/facilitate often know the learners and have ideas about the design elements of a curriculum that would assist learning. Using a team-based approach to design that includes the teacher/facilitator may currently not be common in parts of the CET sector, but there is no reason it could not become a standard practice. The process itself becomes a staff development process that takes place every time there is a new curriculum developed.

- Similarly the tool could be used with the team who has a touch point with the curriculum as a tool to constantly review the curriculum and adapt and adjust it according to changing needs and new ideas as individuals in the team grow and develop. In the same way as suggested in the previous point, this process becomes a professional learning opportunity that is built into the work itself.

We, the research team, make very clear that the Model and its heuristic are *not* a measurement tool. Using the tool for this purpose negates its possibilities for creating dialogue and reflection. While we have implied that the interpretive perspective results in better learning and therefore better curriculum design and philosophy, we also acknowledge that different purposes and accreditation processes will continue to focus on the more instrumental approach, at least in terms of the design philosophy and goal. To change this, it behoves the regulators and tripartite bodies to consider the ways in which competency standards might be written more holistically, as discussed at the recent WSQ review. In addition, there is a considerable difference between short courses and longer, 1- to 3-year, programmes where there are greater opportunities and latitude for innovative design.

As suggested by participants and the reference group, what we do not know is the degree to which different disciplinary and vocational/professional knowledge and its structures mediate curriculum philosophy. This is a potential area for further research. Other areas for further research include exploring the potential for mapping different types of curricula – will it tell us anything useful? The results from our 30 participants indicate that this might be the case. If these initial indications hold

with further research and use of the Model and its heuristic, then the Model and its heuristic are also useful in providing evidence-based policy and management of systems at institutional and national levels.

Finally, the Model and its heuristic have been seen by participants and reference group members as a tool for change. One reference group member makes this point:

> *The heuristic will work well on decision makers within the practising CET sector too, so that future curriculum will more naturally veer towards the desired outcome. In other words, this has transformational potential, but needs to be taken on early enough and at high enough levels, for it to work well.*

For the transformational potential to be realised it is important that recommendations be picked up and acted on. The following recommendations are a consolidation of the suggestions from participants and the reference group.

5.2 Recommendations

It should be emphasised that these recommendations are selected due to their viability and practicality. They should be viewed as proposals requiring further conversations to concretise the implementation details. The primary purpose underpinning the team's recommendations is to drive the adoption and recognition of the IDeA Model through community engagement and research backing, supported by making available self-help resources. Hence, the recommendations are multi-dimensional to meet the needs of practitioners and stakeholders.

To facilitate discussion on possible implementation approaches, the recommendations are categorised into:

1. immediate or near-term implementation
2. mid- to long-term implementation.

Table: 5.1: Implementing the IDeA Model

	Immediate or near-term implementation	**Mid- to long-term implementation**
Develop self-help resources	• Develop a hard copy handout/collateral for practitioners on how to use the Model and heuristic • Develop self-help resources to support users of the Model and heuristic in deeper reflection and team discussion, and place on the IAL website. Additional resources could include: ○ case studies that analyse different responses to different curricula as examples	Develop additional online resources administered by the Adult Education Network and IAL (e.g. video case studies) and encourage sharing by practitioners to showcase use of the Model for different purposes (e.g. for individual reflection, for team reflection, as a dialogue and communicative tool to engage stakeholders in establishing the intent of the curriculum to be designed, as a dialogue tool for providers in engaging curriculum designers)

	○ reflective questions against each dimension	
Conduct workshops/training and facilitated discussions	• Provide workshops for professional development using the IDeA Model and heuristic to engage practitioners in reflective discussions that will deepen their curriculum design understanding and expertise • Incorporate the IDeA Model into current programmes in IAL	Provide consultancy services to training organisations on curriculum design and review
Build an ecosystem and a community of practice	• Disseminate via online platforms such as LinkedIn and Facebook • Engage regulatory agencies in dialogues to align curriculum design terminology so there is a common language between QA agencies and their auditors, providers and curriculum designers • Run workshops for quality assurance personnel in different systems	• Collaborate with enterprises to trial the use of the IDeA Model with their L&D departments • Develop platforms or build on existing platforms to share different uses of the IDeA Model and heuristic across different pedagogical communities (e.g. literacy, special education, occupational health and safety, adult educators from different industries, etc.) to build an ecosystem to support curriculum excellence
Further research	Engage the research community for collaborations and to spur further studies to drive adoption by the CET industry	
Ensure the IDeA Model remains dynamic	Continue to receive feedback to update the model and match the needs of users	• Present the findings from the research study at international conferences and in peer-reviewed journal articles • Conduct further research through the above-recommended activities

Going forward, there is more work needed to further develop the resources for self-reflection, professional development, curriculum profiling and research. To some extent, the continuation of this

work on the IDeA Model also depends on the receptivity of the community to the Model and contributions should be garnered from the community to make the effort more organic and ground-up, in the manner of crowdsourcing, to build an ecosystem to support professionalisation of the CET sector. With a ground-up approach, there are better prospects of the IDeA Model gaining traction and being more relevant to the industry practitioners.

Ultimately, the IDeA Model is designed and developed to benefit the CET community and it must always remain true to the original intent of driving self-reflection and improvement for the individual practitioner, the learning organisation and, finally, the evolving CET sector at the national level.

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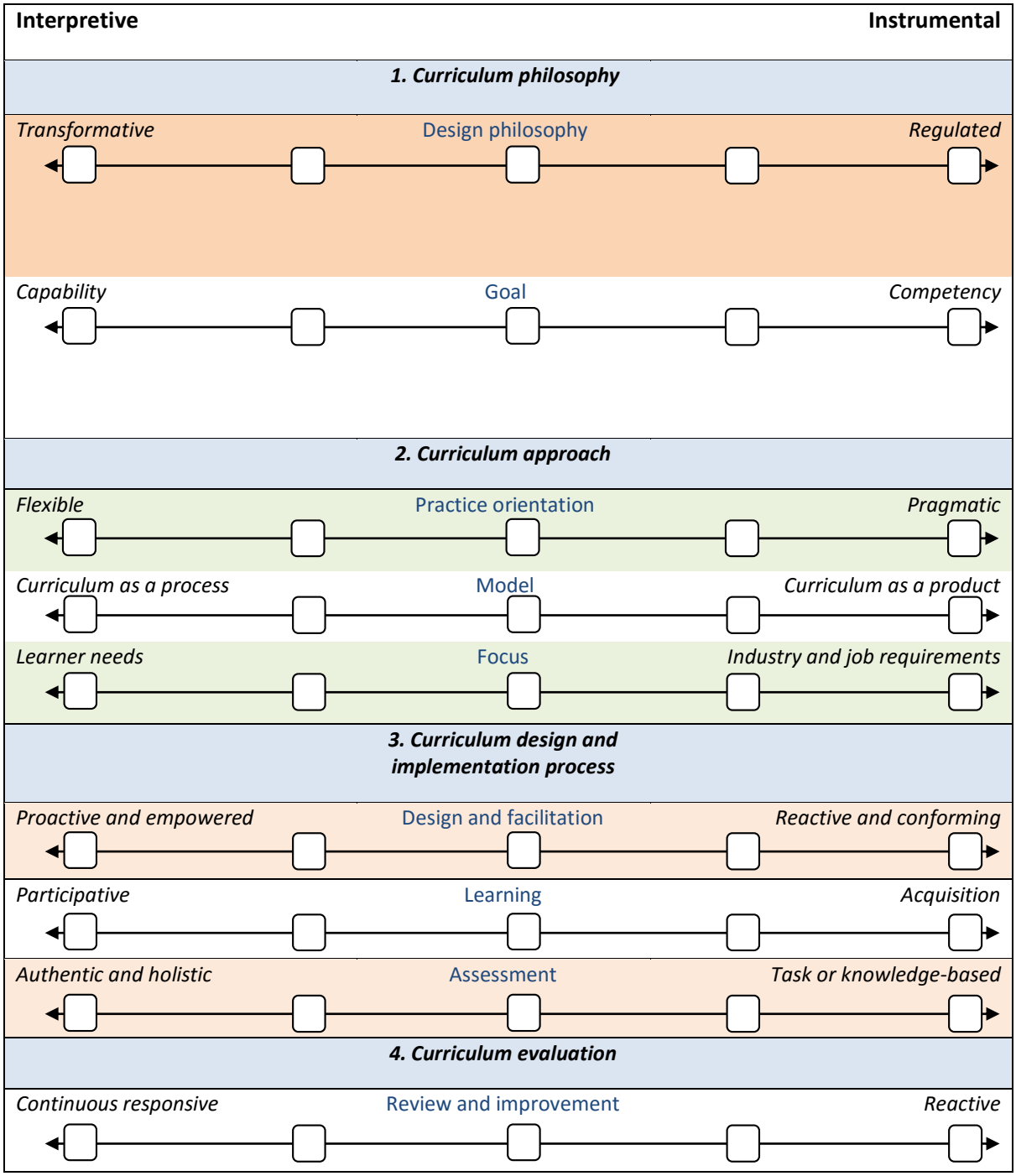
Appendix 1: The IDeA Model heuristic

Use the heuristic below to rate **your** approach to designing and developing curriculum based on the different dimensions. Check the boxes that most closely reflect your curriculum design practice for each scale. You may wish to have in mind a piece of curriculum that you have designed when ticking your responses below.



The IDeA Model

Interpretive		Instrumental
	1. Curriculum philosophy	
Transformative Curriculum is an experience for the learners – individuals understand themselves, others and the world about them, potentially resulting in fundamental shifts in 'mindset' and practices.	*Design philosophy*	*Regulated* Curriculum is conducted in a regulated environment to achieve outcomes related to specific skill, knowledge and attitude development.
Capability End-goal is to develop the individual in character and 'macro' skills which are rarely quantifiable and measured in order to manage job roles within dynamic work environments.	*Goal*	*Competency* Curriculum is directed to meet a set of clearly predetermined defined skills against measurable standards. Learner is understood as an economic unit.
	2. Curriculum approach	
Flexible Curriculum designer draws on broad and deep experience in a negotiated environment between the facilitator and the learners.	*Practice orientation*	*Pragmatic* Practice based on application of competency-based or outcome-based training approaches within a regulated environment.
Curriculum as a *process* Dynamic and flexible due to an emphasis on learning; often subject to informed reinterpretation by the facilitator and learners at the point of delivery.	*Model*	Curriculum as a *product* Regulated; often remains relatively fixed after being made, including at the point of facilitated delivery.
Learner Focus is on the learner, including lifelong learning skills.	*Focus*	*Industry and job* requirements The curriculum meets industry agreed standards.
	3. Curriculum design and implementation process	
Proactive The *facilitator* and *designer* are often the *same*; facilitator is expected to be the subject matter expert, proactive, innovative; often included in a small design team; empowered to make real-time changes to the design.	*Design and facilitation*	*Reactive* The *facilitator* and the *designer* are often *different* with a subject matter expert as the consultant; facilitator is expected to be relatively reactive, following the lesson design strictly; rarely included in design team.
Participative The learner is assumed to be an active learner in their learning; there is an emphasis on reflective and self-directed pedagogies and on developing meta-cognitive skills to empower the learner.	*Learning*	*Acquisition* The learner is assumed to be a recipient of information; knowledge is received/acquired and assimilated with little questioning or challenge.
Authentic and holistic Broad-based including attitudes and metacognitive abilities; assessment is authentic. Assessment for learning contributes to constant adjustments to the enacted curriculum to meet learning needs; assessment as learning contributes cumulatively to learning and to assessment *of* learning.	*Assessment*	Task or knowledge-based Assessment of observable behaviours related to specific task or knowledge set; generally summative assessment, that is, assessment *of* learning. Assessment tends to take place within educational institutions.
	4. Curriculum evaluation	
Continuous responsive Improvements are both formal and triggered by learner experience and facilitator feedback in a continuous feedback cycle.	*Review and improvement*	*Reactive* Improvements are driven by external audits and top-down pressure from management.

Appendix 2: Semi-structured interview schedule

Semi-structured interview questions on the IDeA Model

	Interview questions
	Section A: Demographics and roles of interviewee
1	Can you briefly share about your current job role?
2	How are the curricula in your organisation designed and delivered?
	Section B: General perceptions of IDeA Model
1	What is your initial perception of the IDeA Model? Why?
2	Do you see this model and checklist [heuristic] as being useful for curriculum designers? • How can the model and checklist [heuristic] be used in CET? • Who will use it?
	Section C: Dimensions in IDeA Model
1	Can you share which of the four dimensions resonate with you as a designer? Why? • Philosophy • Curriculum approach • Curriculum design and implementation process • Curriculum evaluation
2	Are there any items which seem difficult for you to relate to? Why?
3	How can we improve the Model?
	Section D: Impact of IDeA Model
1	How does the IDeA Model help you to reflect as a curriculum designer?
2	How do you see CET practitioners use the IDeA Model in their work?

Appendix 3: Participants

a) Interviews

Pseudonyms	Organisation	Type of courses	Role	Range of experience	Years of experience
Stacey	Government agency	Non-WSQ	L&D	Design, development, facilitation, HR	Experienced
Cleo	CET centre	Mostly WSQ	Curriculum designer	Design, development, facilitation, workplace learning	Experienced
Richard	Enterprise and in-house ATO	Mostly non-WSQ	L&D (one-man unit)	Design, development, facilitation	Experienced
Sara	New public ATO	Mostly non-WSQ	Co-owner and chief designer	Training management, design, development, facilitation	Experienced
Josiah	Training provider	WSQ	General manager/ principal	Training management, design, development	Experienced
Macy	Training provider	WSQ and non-WSQ	Curriculum designer	Design, development	New
Adeline	Training provider	WSQ and non-WSQ	Head, curriculum design and development	Design, development	Experienced
Selina	CET centre	WSQ	Adjunct curriculum designer and CIR auditor	Design, development, curriculum audit	Experienced
Pin	CET centre	WSQ	Curriculum designer	Design, development	Experienced
Halley	CET centre	Mostly WSQ	Curriculum designer	Design, development	New
Clarence	Enterprise	Non-WSQ	GM	Training management, curriculum design	New
Sue	CET centre	WSQ	Head, curriculum design and development	Training management, design, development	Experienced
Ivan	Former regulator	WSQ	Curriculum and ATO auditor	Design, development, review	Experienced

Pseudonyms	Organisation	Type of courses	Role	Range of experience	Years of experience
Xi	Non-profit society	Non-WSQ	Curriculum designer and trainer	Design, development and training	New
Rice	Enterprise	WSQ and non-WSQ	L&D	Training and development	New
Darren	Regulatory body	WSQ	Reviewing the current QA process for curriculum accreditation	QA	New
Thun	Training provider	WSQ and non-WSQ	Senior manager	Trainers and content development, IT	Experienced
Felix	A Singapore university	Non-WSQ	Deputy director, pedagogy centre	Management role to drive pedagogy (i.e. team-based learning and outcomes-based learning)	Experienced
Caleb	A national institute	Mostly WSQ	Curriculum management	Curriculum design and development	Experienced
Kim	A business council	Non-WSQ	Training management	Training management and review	New
Leela	Training provider	WSQ	Designer/ trainer	Design, development	Experienced
Roland	Training provider	WSQ	Designer/ trainer	Design, development	Experienced
Charles	Training provider	Mostly WSQ	Designer/ trainer	Design, development	Experienced
Ginny	A CET institute	WSQ	Training management	Training management	Experienced
Chris	Polytechnic	Non-WSQ	Designer/ trainer	Design, development	Experienced
Yip	A CET institute	WSQ	Designer/ trainer	Design, development	Experienced
Lily	New approved training provider	Mostly non-WSQ	Designer/ trainer	Design, development	Experienced
Pam	New approved training provider	Mostly non-WSQ	Designer/ trainer	Design, development	Experienced
Chels	A CET institute	WSQ	Designer/ trainer	Design, development	Experienced
Tim	A CET institute	WSQ	Designer/ trainer	Design, development	Experienced

b) Reference group

Organisation	No. of participants	Type of courses	Roles
WDA TPDD	4	WSQ	Regulatory – accreditation and audit
IAL	4	Mostly WSQ	Training management, curriculum designer, facilitator
IAL adult educators	2	Both WSQ and non-WSQ	Adjuncts Principals of their own business Facilitators, curriculum designers and developers
CSC	1	non-WSQ	Training management, curriculum designer, facilitator
Universities	2	Mostly non-WSQ	Teaching and learning management
Polytechnics: CET and PET	3		Teaching and learning management