

Deng, Z. (2023). Recontextualizing and Translating Twenty-First Century Competencies into Curriculum. In: Lee, W.O., Brown, P., Goodwin, A.L., Green, A. (eds) International Handbook on Education Development in Asia-Pacific. Springer, Singapore. https://doi.org/10.1007/978-981-16-2327-1_155-1

Recontextualising and Translating Twenty-First Century Competencies into Curriculum: Bringing *Didaktik* into Conversation

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Abstract

There has been a significant body of literature produced by Asian researchers that describes how twenty-first century competencies are recontextualised into educational policies, translated into comprehensive plans for implementation, and taught in schools and classrooms in various Asian contexts. However, researchers have seldom questioned the basic assumptions underpinning the competency discourse and the ways of translating competencies into the curriculum.

This chapter examines how twenty-first century competencies are recontextualised into educational aims and translated into the national curriculum in Singapore and, in so doing, questions the competency discourse and the way of translating competencies into the curriculum. It starts by describing how Singapore has responded to the challenges of

globalisation by introducing a set of educational and curricular initiatives and policies. It next examines how twenty-first century competencies are recontextualised into educational aims and translated into syllabus documents. Afterwards, the chapter questions the basic assumptions underpinning the competency discourse and the ‘infusion strategy’ for incorporating competencies into the curriculum. This is followed by introducing the basic tenets of *Bildung*-centred *Didaktik* and next by arguing that this theory provides an alternative, viable way of thinking about competencies and translating competencies into the curriculum. The chapter concludes by discussing what it means to bring this way of thinking into the conversation about twenty-first century competencies, curriculum making, and classroom teaching.

The chapter can also be seen as an attempt to introduce *Didaktik* to Asian education communities. As such, it seeks to invite policymakers, curriculum developers, educators, and researchers to think beyond the current competency discourse and competency-based approaches to curriculum making, using curriculum and educational language as offered by *Bildung*-centred *Didaktik*. This theory foregrounds the importance of disciplinary-based content – rather than generic competencies – and of positioning students as subjects of their own rights for developing human powers (understanding, capabilities, dispositions).

Keywords: Twenty-first century competencies; curriculum making; *Didaktik*; *Bildung*; content; Singapore.

The turn of the century saw a global movement towards delineating the purpose of education in terms of twenty-first century competencies and competency-based outcomes (Yates and Collins 2010; Young 2009). The movement is underpinned by a *competency* discourse – promoted by powerful international organisations such as EU, OECD, and UNESCO – which posits a body of skills that individuals need in order to *succeed* in the twenty-first century (Biesta and Priestley 2013; Hopmann 2008; Willbergh 2015). Accompanying the movement is a move to bypass formalised curriculum making – concerned with how knowledge is selected and organised into the curriculum – in favour of competency-based approaches to the curriculum (Hopmann 2008; Karseth and Sivesind, 2010). EU, OECD, UNESCO, and other organisations have developed several competency frameworks which provide more specific descriptions of twenty-first century competencies and make recommendations on learning environments, pedagogical methods, and assessment strategies for implementation in schools and classrooms (Binkley et al. 2012; OECD 2005; P21 2016).

The competency discourse and various competency frameworks have been enthusiastically embraced by policymakers, educational stakeholders, and educators from different parts of the world. As a result, they have found their way into curriculum frameworks, syllabuses, and instructional materials in many countries around the world, redefining what school education is for and what constitutes the core of the curriculum at the global level. This is particularly evident in several Asian countries or regions – notably China, Singapore, Japan, South Korea, Taiwan, Hong Kong, and Macau. There has been a significant body of literature produced by Asian researchers that describes how twenty-first century competencies are ‘recontextualised’ into educational policies, translated into comprehensive plans for implementation, and taught in schools and classrooms in various Asian contexts (e.g., Chen and Huang, 2017; Cheng 2017; Kim and Eom 2017; Kimura and

Tatsuno 2017; Lin and Zheng, 2021; Tan and Choo et al 2017; Tan and Koh et al; 2017; Wei et al 2020). However, researchers have seldom questioned the basic assumptions underpinning the competency discourse and the ways of recontextualising and translating twenty-first century competencies into the curriculum.

This chapter examines how twenty-first century competencies are recontextualised into educational aims and translated into the national curriculum in Singapore and, in so doing, questions the competency discourse and the way of translating competencies into the curriculum. In Singapore, the national curriculum is represented by a set of syllabus documents which specify the contents to be taught and suggest pedagogical approaches and assessment practices for all school subjects, from primary to pre-university levels. Developed by the Ministry of Education (MOE), the syllabus documents are an important instrument for implementing educational policies and initiatives (Deng 2010; Deng, Gopinathan and Lee 2013). Teachers are expected to follow what is in the syllabus documents in instructional planning and practice.

To start with, the chapter describes how Singapore has responded to the challenges of globalisation by introducing a set of educational and curricular initiatives and policies. It then examines how twenty-first century competencies are recontextualised into educational aims and translated into syllabus documents. Afterwards, the chapter questions the basic assumptions underpinning the competency discourse and the way of translating competencies into syllabus documents. This is followed by introducing the basic tenets of *Bildung*-centred *Didaktik* within the German tradition and next by arguing that this theory provides a viable, alternative to the competency discourse and curriculum translation. The chapter concludes by discussing what it means to bring *Didaktik* into the conversation about twenty-first century competencies, curriculum making, and classroom teaching from the perspective of *Bildung*-centred *Didaktik*.

Globalisation, educational and curricular initiatives and implementation

Since the mid-1990s the Singapore government has endeavoured to reform the curriculum and pedagogical practice in the light of the perceived challenges of globalization and the emerging knowledge economy. The Singaporean vision for bracing the challenges is encapsulated in the overreaching framework, 'Thinking School, Learning Nation' (TSLN), launched by then Prime Minister Goh Chok Tong in 1997. TSLN 'addressed the conditions of nationhood and globalisation and laid out a more student-centric, active learning paradigm, with the aim of producing autonomous and independent learners with capacity to think, innovate, and learn continuously' (Deng and Gopinathan 2016: 457). Under the TSLN's framework, a plethora of reform policies and initiatives have been rolled out to transform the curriculum and pedagogical practices directed toward preparing Singaporeans to be critical and innovative thinkers, capable of making sound decisions, committed to life-long learning, and loyal to the country – 'precursors' of twenty-first century competencies. Below are several major policies and initiatives introduced between 1997 and 2009:

- The Thinking Programme (1997) that aims at the development of critical and creative thinking through introducing thinking skills to the curriculum.
- IT-Masterplan (1998–2002; 2003–2008; 2009–2014) that seeks to establish an ICT-infrastructure and increase tools and resources for the exploitation of the power of ICT for teaching and learning in classrooms, schools and beyond, with the intention to equip students with the competencies and dispositions to succeed in a knowledge economy.
- National Education (1998) that aims at developing national cohesion through sensitising younger Singaporeans to the national needs, concerns and possibilities in an emergent global economy, and developing in them a sense of belonging and emotional rootedness to Singapore.

- Content reduction (1998) that mandates a content reduction across all school subjects ranging from 10% to 30% in order to create more curricular space for pedagogical innovations and the development of critical and creative thinking and other desirable attributes.
- Project work (2000) that aims to provide students with an integrated learning experience that encourages students to break away from the compartmentalisation of the different school subjects and to explore the inter-relationships and inter-connectedness of subject-specific knowledge.
- Innovation and Enterprise (2004) that aims at cultivating in students intellectual curiosity, innovative thinking, self-reliance, persistence, resilience, a team-work spirit and social commitment.
- Teach Less Learn More (TLLM) (2005) that envisions students as ‘engaged learners’ actively in the process of learning for life rather than for examination, and calls on teachers to rethink the ‘why’, ‘what’ and ‘how’ of education. (Deng and Gopinathan 2016: 457-458; also see Deng 2019)

All these reform policies and initiatives can be seen as the early attempts of the government to introduce twenty-first century competencies – problem-solving, critical and innovative thinking, information skills, and so forth – into the school curriculum, together with learner-centred, constructivist, and technology-enhanced pedagogies deemed necessary for teaching the competencies. Overall, the TSLN’s vision of curriculum and pedagogy can be characterised by:

(1) more opportunities for constructing knowledge, problem-solving, higher order thinking and innovation; (2) more meaningful use of ICT for teaching and learning – in terms of transforming classroom practice, expanding access to quality learning, and

enhancing collaboration among teachers, students and communities and (3) more time on interdisciplinary learning. (Deng and Gopinathan 2016:458)

Recontextualising and translating twenty-first century competencies into curriculum

The introduction of the Curriculum 2015 (C2015) in 2008 marked the recent phase of curriculum and pedagogical reform, which is explicitly concerned with the development of twenty-first century competencies in students. It led to the formulation of the framework for the 21st Century Competencies and Student Outcomes (2011) – which delineates the aims of education in terms of competency-based outcomes, spells out the competencies to be incorporated into the national curriculum, and lays out strategies for implementation (MOE 2010, 2011).

Delineating educational purposes in terms of competency-oriented outcomes

In the framework the aims of education are stated in terms of competency-oriented outcomes, according to which all students are to become:

- **Confident persons** who have a zest for life, have a strong sense of right and wrong, are adaptable and resilient, know themselves, are discerning in judgment, think independently and critically, and communicate effectively.
- **Self-directed learners** who take responsibility for their own learning and question, reflect and persevere in the lifelong pursuit of learning.
- **Active contributors** who are able to work effectively in teams, exercise initiative, take calculated risks, are innovative and strive for excellence.
- **Concerned citizens** who are rooted to Singapore, have a strong civic consciousness, are responsible to their family, community and nation and take active roles in improving the lives of others. (MOE, 2011)

These are further translated into a set of more specific developmental outcomes for each of the main stages of the school system, primary, secondary, and post-secondary. For example, at the end of secondary schools, students are expected to:

- Have moral integrity.
- Believe in their abilities and be able to adapt to change.
- Be able to work in teams and show empathy for others.
- Be creative and have an inquiring mind.
- Be able to appreciate diverse views and communicate effectively.
- Take responsibility for their own learning.
- Enjoy physical activities and appreciate the arts.
- Believe in Singapore and understand what matters to our country. (MOE, 2011)

The four outcomes, together with the more specific outcomes, are achieved through the development of a series of twenty-first century competencies and related values deemed essential for life and work in a globalised, fast-changing and highly connected world. Chief among these competencies are: (1) critical and innovative thinking, (2) communication, collaboration and information skills, and (3) civic literacy, global awareness and cross-cultural skills. In addition, there are social and emotional competencies – self-awareness, self-management, social awareness, relationship management, and responsible decision-making – that are viewed as ‘enablers’ to the development of these major competencies. Furthermore, there are core values – respect, responsibility, integrity, care, resilience, and harmony – that are seen as ‘anchors’ for the development (Tan and Koh et al 2017; MOE 2011).

Formulating the purposes of education in terms of competency-oriented outcomes can also be seen in Scotland (Biesta and Priestley 2013), Australia (McGaw 2013), New Zealand (McPhail and Rata 2016), and Taiwan (Chen and Huang 2017). In other words, what is seen

in the Singaporean framework for the 21st Century Competencies and Student Outcomes is ‘part of a wider [international] trend in curriculum policy and practice where the purposes of education are no longer articulated in terms of what students should learn but in terms of what they should become’ (Biesta and Priestley 2013: 7). It is important to note that while the Singapore’s national curriculum is supposed to make room for twenty-first century competencies, academic subjects like mathematics, Science, languages, and humanities have remained fundamentally important to ensure a strong and broad-based foundation for all students. While there are modifications in examination formats and assessment criteria, the national examination and assessment system has remained intact to ensure that academic standards and rigors are not compromised (Deng, Gopinathan and Lee 2013).

Infusing competencies into syllabus documents

According to the framework twenty-first competencies are to be ‘infused’ into the academic curriculum, co-curricular activities, and active and applied learning programmes. They are to be taught explicitly in schools and classrooms (MOE 2011). Focusing on critical and innovative thinking, this section examines how twenty-first competencies are translated into the academic curriculum – in the form of syllabus documents – through the ‘infusion strategy’. The academic curriculum is regarded as the main medium for the development of twenty-first century competencies (Deng, Gopinathan and Lee 2013).

In the infusion strategy critical and innovative thinking is translated into sets of skills, processes, and attitudes and then incorporated into syllabus documents; they are to be taught alongside the knowledge component of a school subject. This can be achieved by conceptualising a school subject as inquiry or problem solving, hence foregrounding the employment of knowledge, processes, and skills in investigative processes. This way of

translating critical and innovative thinking into the curriculum is particularly evident in the lower secondary science and mathematics syllabuses.

In the science syllabus science is conceptualised as a practice of inquiry which entails three content components: (1) *knowledge, understanding and application*, (2) *skills and process*, and (3) *ethics and attitudes*. The first component consists of a body of scientific facts, concepts, principles and techniques which are ‘chosen to provide a broad-based understanding of the environment’ and ‘help build a foundation upon which students can rely on for further study (MOE 2013a: 6). The second component involves a set of skills and processes which are to be employed by students to inquire about scientific phenomena. The third component consists of several attitudes needed for all scientific inquiry. Table 1 provides detail of the three components.

Table 1. Three components that frame the practice of science as inquiry.

Knowledge, Understanding and Application of	Skills and Processes	Ethics and Attitudes
<ul style="list-style-type: none"> • Scientific phenomena, facts, concepts and principles • Scientific vocabulary, terminology and conventions • Scientific instruments and apparatus including techniques and aspects of safety • Scientific and technological applications 	<p><u>Skills</u></p> <ul style="list-style-type: none"> • Posing questions • Formulating hypothesis • Defining the problem • Generating possibilities • Predicting • Observing • Using apparatus and equipment • Comparing • Classifying • Inferring • Analysing • Evaluating • Verifying • Communicating <p><u>Process</u></p> <ul style="list-style-type: none"> • Creative problem-solving • Planning investigation • Decision-making 	<ul style="list-style-type: none"> • Curiosity • Creativity • Objectivity • Integrity • Open-mindedness • Perseverance • Responsibility

In short, critical and innovative thinking is translated into skills, processes, and attitudes which are infused into the curriculum. Teachers are expected to explicitly teach those skills, processes, and attitudes by having students to employ scientific knowledge, skills and processes to inquire about phenomena around them. More specifically, they are to provide students with opportunities to ‘ask questions about knowledge and issues that relate to their daily lives, society and the environment; be actively engaged in the collection and use of evidence; formulate and communicate explanations based on scientific knowledge’ (MOE 2013a: 12).

In the mathematics syllabus (MOE2013b) school mathematics is conceptualised as problem solving, in line with the Mathematics Framework centred on mathematical problem solving which has been used since 1990. In the syllabus curriculum content consists of three broad categories: (1) mathematical concepts and skills, (2) process and thinking skills, and (3) attitudes and metacognition. Table 2 outlines these three categories in detail.

Table 2. Three categories that frame mathematics as problem solving.

Mathematical concepts and skills	Processes	Attitudes and metacognition
<u>Concepts</u> <ul style="list-style-type: none"> • Numerical • Algebraic • Geometric • Statistical • Probabilistic • Analytic 	<u>Reasoning, communication and connections</u> <ul style="list-style-type: none"> • Analyse mathematical situations • Construct logical arguments • Make connections 	<u>Attitudes</u> <ul style="list-style-type: none"> • Beliefs • Interest • Appreciation • Confidence • Perseverance
<u>Skills</u> <ul style="list-style-type: none"> • Numerical calculation • Algebraic manipulation • Spatial visualisation • Data analysis • Measurement • Use of mathematical tools • Estimation 	<u>Application and modelling</u> <ul style="list-style-type: none"> • Make informed decisions based on data • Reflect on solutions to real world problem; consider alternatives • Solve unfamiliar real-world problems 	<u>Metacognition</u> <ul style="list-style-type: none"> • Monitoring of one’s own thinking • Self-regulation of learning

	<ul style="list-style-type: none"> • Tackle variety of problems; deal with ambiguity; make assumptions <p><u>Thinking skills and heuristics</u></p> <ul style="list-style-type: none"> • Comparing, identity problems, induction, deduction • Rules of thumb to solve unfamiliar problems 	
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Critical and inventive thinking is translated into two sets of process skills -- pertaining ‘reasoning, communication and connections’ and ‘application and modelling’ – and a set of thinking skills and heuristics, together with attitudes and metacognition. In practice, teachers are expected to ‘provide a more engaging, student-centred, and technology enabled learning environment, and promote greater diversity and creativity in learning’(MOE 2013b: 17). More specifically, they are to provide students with opportunities to ‘discover mathematical results on their own’, to ‘work together on a problem and present their ideas using appropriate mathematical language and methods’, and to ‘set learning goals and work toward them purposefully’ (20).

Overall, the infusion strategy used in Singapore mirrors a global way of translating twenty-first century competencies into national curriculum frameworks – in which competencies are ‘symbolically added to the already existing curriculum as new subjects or as new content within traditional subjects [competence-added curriculum]’ (Nordin and Sundberg 2021: 27). The strategy is very different from two other ways in which competencies are taken: (1) as ‘integrated ad hoc or more systematically as cross-curricular

competences that both underpin school subjects and place emphasis on the acquisition of wider key competences [competence-integrated curriculum]' and (2) as 'the main design principles for a new curriculum in which the traditional structure of school subjects is transformed and schools are regarded as learning organisations [competence-transformed curriculum]' (27). A competence-integrated curriculum (the second way) can be exemplified in what is called 'outcome-based education' in which the curriculum is governed by goals (competencies) and teachers are given responsibilities for selecting and organising the contents of school subjects according to the goals. A competence-transformed curriculum (the third way) can be illustrated by the case of liberal studies (a compulsory school subject introduced to Hong Kong senior secondary schools in 2008) – in which contents are selected and organised around contemporary themes and issues in a way that encourages students to participate in knowledge construction and develop twenty-first century competencies (see Deng 2009).

Issues and problems

There are issues and problems associated with the above way of recontextualising and translating twenty-first century competencies into the curriculum.

Framing educational purposes as competency-oriented outcomes

As indicated already, the Singapore government's move to conceptualise the purposes of education in terms of competency-oriented outcomes represents part of a global movement towards twenty-first century competency-based education. This global movement is inextricably aligned with the agenda of supranational organisations such as the OECD and the World Bank to promote knowledge economies (Anderson-Levitt 2017; Nordin & Sundberg 2021; Tahirsylaj and Sundberg 2020). It is noteworthy that in Singapore the preparation of younger generations for knowledge economies has long been a primary

concern of the government. Those educational initiatives and policies under TSLN noted above constitute the government's early response to the exigencies of economic globalisation, with a focus on equipping students with the necessary knowledge and skills to compete in the global knowledge-based economy. The curriculum 2015 particularly focuses on the 'anticipated skills and competencies a child born in 2014 might need by the time of graduation and entering the workforce' characterised by innovation, technology and knowledge-intensive activities (Silver et al 2013: 153). The promotion of twenty-first century competencies in Singapore further 'reinforces economic utilitarianism in which individuals are developed in service of a nation's economic and human resource goals' (Choo 2018:164).

A concern then can be raised. With the framing of educational purposes as competency-oriented outcomes, students are being positioned as merely 'objects of intervention' rather than 'subjects in their own right' (Biesta and Priestley: 2013). It is important to note that *competency* is not an educational but *economical* concept which finds its origin in the field of human resources management. The theoretical underpinning of competency-based approaches to education is *human capital theory* on the basis of which organisations optimise the contribution of individuals to organizational goals and functions by equipping them with requisite knowledge and skills (Biesta and Priestley 2013; Labaree 2014; Willbergh 2016). Missing in the competency discourse and current global movement toward competency-based curriculum are broader, more important questions of what it means to be an autonomous individual in his or her own right and what capabilities or powers he or she needs to develop in a democratic society (see Biesta 2017)

An uncritical acceptance of the current competency discourse, then, risks committing oneself to a vision of education which is mostly economical and instrumental, neglecting or undermining the self-formation of individuals which requires development in multiple dimensions – personal, social, religious, moral, and non-material. Such a concern has been

raised by Singaporean scholars (Choo 2020, 2018; Deng and Gopinathan 2016). The competency discourse, as Choo (2020:21) observed, ‘presumes that individuals are motivated by economic prospects’ and ‘discounts the value of social, religious, moral, and non-material dimensions of life’. The discourse, Deng and Gopinathan (2016: 464) argued, leads to ‘economisation of education policy’. Apart from economic development, schools are expected to serve ‘the functions of social cohesion, citizenship education and nation building – goals that are at least as important as the economic one’.

The infusion strategy

The infusion strategy for incorporating twenty-first century competencies into the curriculum is highly questionable and problematic. In Singapore the idea of twenty-first century competencies is not new, nor is the infusion strategy. As already indicated, before the introduction of the Curriculum 2015, the MOE had implemented several reform initiatives – such as the thinking school programme, IT-masterplans, and TLLM – directed towards the development of critical thinking, creativity, innovation, life-long learning, and other generic skills in students. These skills, which later came to be called *twenty-first century competencies* in the Curriculum 2015, were translated into bodies of (sub)skills, processes and values and then ‘infused’ into the syllabus documents for implementation. They were also supposed to be taught through student-centred and constructivist approaches such as problem-solving, discovery learning, and inquiry-based learning (see Deng 2001; Deng, Gopinathan and Lee: 2013). However, empirical research findings generated by Centre of Research on Pedagogy and Practice (CRPP) between 2004 and 2010 were [very disappointing](#), showing little ‘success’ in classrooms.

Notwithstanding multiple reform initiatives to encourage the TSLN’s pedagogical vision, pedagogical practice in Singapore’s classrooms has remained largely traditional,

directed towards curriculum content delivery and examination performance. There is very little evidence of sustained teaching for higher order thinking, meaningful use of ICT, students' constructing knowledge, and interdisciplinary learning (Deng and Gopinathan 2016: 458).

More recent evidence gathered between 2015 and 2017 indicates that while there was 'a decline in factual knowledge and an increase in procedural and conceptual knowledge', opportunities for critical thinking, creativity, and other high order thinking capabilities remained rare (Gopinathan 2018: 28; also Kwek 2018). The little or limited impact on what and how is taught in classrooms has to do with teachers' traditional beliefs about the nature of knowledge, teaching and learning and the high stakes examination system. As Deng and Gopinathan (2016: 459) explained,

In Singapore, teachers conventionally tend to view knowledge as a body of proven, ready-made facts or factual information contained in the national curriculum, expressed in textbooks upon which students are tested during examinations. Accordingly, they are inclined to view teaching as passing on knowledge in the curriculum, and learning as acquiring, memorising and practising this knowledge (Deng and Gopinathan 1999; Hogan et al. 2013; also see Chai, Khine, and Teo 2006). For students, this view of learning is strengthened by their participation in out-of-school tuition. Such beliefs shape classroom practice towards the transmission, examination-oriented mode, despite reform initiatives calling for a new kind of pedagogical practice. These beliefs are strengthened by the existence of 'a very tight coupling between the high-stakes summative assessment system and classroom instruction' (Hogan and Gopinathan 2008, 370). The assessment system, fundamentally unchanged, exercises a firm grip over classroom practice.

In other words, teachers' traditional epistemological beliefs, and the transmissive, examination-driven pedagogical practice underpinned by such beliefs, prevent them from teaching the bodies of skills, values and attitudes added onto syllabuses. Their beliefs are reinforced by the national high stakes examination system which has a 'persistent institutional grip' over what teachers teach and how they teach in classrooms (Hogan, 2011; also see Deng 2019).

However, even if teachers teach the skills, values and attributes infused into the curriculum, it is highly questionable that what they teach are competencies as defined. The term *competency* goes well beyond the possession of knowledge, skills, and attributes. It involves 'a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain' (Crick 2008:313). Or, as the OECD (2018:3) puts it, competency 'involves the mobilization of knowledge, skills, attitudes and values in a range of specific context to meet complex demands'. The term loses its original meaning once it is translated into generic skills, values and attributes apart from specific contexts where people carry out action and practice, independent of knowledge content (Willbergh 2015).

In this chapter the author is particularly concerned with the erosion of the role and significance of knowledge associated with the global competency movement. As indicated at the beginning, across the globe generic competencies have taken centre stage in defining the purposes of education and determining approaches to the curriculum, with knowledge being relegated to the background or something with marginal importance. In Singapore, the undermining of knowledge is particularly manifested in the infusion strategy – according to which competencies are 'symbolically' added on to the curriculum, to be taught alongside the contents of school subjects. Underpinning the strategy is the assumption that the content or subject matter of a school subject has nothing to contribute to human powers such as

creativity, imagination, critical thinking and problem-solving. Hereafter *human powers* or *powers* is used lieu of *competencies* because the former, as will be made clear below, is an educational concept that has a much longer history in *Didaktik* and can avoid the pitfalls inherent in the economic notion of competencies.

The assumption above is a far cry from what Dewey (1902/1990:190) argued in his seminal *The Child and the Curriculum* more than a century ago:

...the various studies, arithmetic, geography, language, botany, etc., are themselves experience – they are that of race. They embody the cumulative outcome of the efforts, the strivings, and the successes of the human race generation after generation. They present this, not as a mere accumulation, not as a miscellaneous heap of separate bits of experience, but in some organized and systematized way – that is, as reflectively formulated.

In other words, as a special cumulative form of human experience, the content of a school subject like science or mathematics represents is an outcome or embodiment of human intellect, ways of thinking, wisdom, value, and ideal. It has immense potential for cultivating human powers in classrooms. From this perspective, the translation of competencies into the curriculum does not need to be a matter of infusing ‘competencies’ into the curriculum from outside. It is in essence a curriculum making task having to do with the selection and organisation of the content of a school subject in terms of potential for human powers and realisation in classrooms. Such a task is well articulated in *Bildung*-centred *Didaktik* which, as well be argued, provides a viable alternative to the competency discourse and infusing strategy in the sense that it can overcome their inherent issues and problems.

Bildung-centred *Didaktik*

German *Didaktik* provides a body of thinking about knowledge, curriculum, and classroom teaching embedded in the institutional context of schooling which is ‘virtually unknown’ in the English-speaking world (Westbury 2000). It can ‘highlight some very important, and universal, educational questions that are not well-articulated in the English-language curriculum tradition’ (15). The Anglophone curriculum tradition has been extremely influential in many Asian countries or regions like Singapore, Australia, New Zealand, Hong Kong, and Taiwan where the German tradition of *Didaktik* remains largely unknown. In this regard, this chapter can be seen as an attempt to introduce *Didaktik* to Asian education communities.

Among various schools of *Didaktik*, *Bildung*-centred *Didaktik* has had an enduring impact on classroom practice and teacher education in Continental Europe (Gundem 2000). Unlike competency discourse, *Bildung*-centred *Didaktik* regards knowledge as a powerful resource for the development of human powers or capabilities. As such, it places knowledge centre stage in curriculum planning and classroom teaching. This calls for curriculum thinking concerning what content is, what educational potential content has, and how the potential can be disclosed and actualised in classroom (Doyle 2008).

Bildung-centred *Didaktik* is positioned within the realm of human sciences (*Geisteswissenschaften*) rather than natural science (*Naturwissenschaften*). At the heart of it are three essential ideas: (1) a concept of *Bildung*, (2) a theory of content that translates *Bildung* into curriculum and teaching, (3) teaching as an encounter between students and content.

Bildung

As a distinctively German notion of what education is, *Bildung* refers to both the outcome and process of the formation of the self through the development of human powers

(understanding, capabilities or abilities) and dispositions such as sensibility, self-awareness, liberty, freedom, and dignity. It is achieved through interactions of an individual with the world (physical, cultural, social) (von Humboldt 2000; also Hopmann 2007). The world, independent of human thinking and practice, is processed by different forms of human thought represented by various academic disciplines (humanities and sciences) and knowledge fields (Lüth, 2000).

In *Bildung* the individual is envisioned as a subject with agency and developed intellectual, moral, aesthetic and physical powers. *Bildung*-centred *Didaktik*, in the words of Gündem (2000: 242), is animated by the image of a ‘responsible and socially aware person contributing to his or her own destiny and capable of knowing, feeling, and acting’. As embodiments or representations of the world, academic disciplines and related knowledge fields are indispensable resources for the cultivation of human powers and dispositions. In this connection, *Bildung* provides a corrective to the competency discourse which, as noted above, positions an individual as an object of intervention and ignores the role and significance of knowledge in education.

A theory of content

The translation of *Building* into the state curriculum guideline (*Lehrplan*) entails deliberative curriculum making concerned with the selection and organisation of content. It entails a *Didaktik* or curriculum way of interpreting or theorising content – represented by a theory of content (*Theorie der Bildungsinhalte*). This theory consists of four important concepts: *contents of education (Bildungsinhalt)*, *educational substance (Bildungsgehalt)*, *the elemental (das Elementare)*, and *the fundamental (das Fundamentale)*.

Contents of education refer that which are contained in the state curriculum guideline – the products of a deliberative selection and organisation from the wealth of academic

knowledge, experience and wisdom for *Bildung*. Contents, set aside for teaching, embody educational potential for *Bildung*.

... these contents, once the children or adolescents have internalized and thus acquired them, would enable them to 'produce a certain order' (Litt) in themselves and at the same time in their relation to the world, to 'assume responsibility' (Weniger), and to cope with the requirements of life, and take the free chances of life. The contents of teaching and learning will represent such order, or possibilities for such order, such responsibilities... (Klafki, 2000: 150)

The educational potential of contents is found in its educational substance (*Bildungsgehalt*):

Within the whole of the contents to be acquired there is the essential and the inessential, fruit and leaves, the interior and the exterior. As the learners process the matter, differences emerge ... There are different degrees of internalization of what is presented: some matter penetrates through to the roots of inner growth, the rest remains peripheral. From among the whole of an object of instruction, we distinguish its educational substance (*Bildungsgehalt*) and comprehend the latter as those elements of the former where the subject matter can begin to take root and to be internalized, and on whose retention the value of the learning and the practising essentially depends.... Teach in such a way that what is given is learned... and that its substance (*Bildungsgehalt*) can take effect. (Willmann 1957, cited in Klafki, 2000: 147)

The educational substance takes the form of *elemental* elements (concepts, principles, relations, values, methods) which enable the content to be grasped and internalized by an individual. By virtue of the elemental elements, the content can have a *fundamental* impact on the powers, dispositions, and ways of being-in-the-world of the individual (Krüger, 2008).

Likewise, the individual opens himself or herself to the content in the form of elemental elements (Klafki, 2000).

Informed by this theory of content, the state curriculum guideline (*Lehrplan*) only lays out school subjects and their contents. It does not specify educational substance, meaning, and significance – which are to be identified, interpreted and unpacked by teachers in their classroom situations (Hopmann, 2007). Teachers are entrusted with a high level of professional autonomy to interpret the state curriculum guideline. They are the key to realizing the educational potential of content in the state curriculum guideline, using *Didaktik* as a tool.

Classroom teaching

Classroom teaching is viewed as a ‘fruitful encounter’ between content and the learner (Klafki 2000) – rather than a mere acquisition or the development of a deep understanding of content knowledge. The teacher interprets and translates the content in the curriculum guideline into events and tasks that bring about a fruitful encounter between students and content. The interpretation and translation call for *Didaktik* or curriculum thinking directed toward unlocking and actualising the educational potential of content.

The teacher identifies the elemental elements (educational substance) of content and unpack its educational meaning and significance in terms of *Bildung*, with particular students in mind and within a particular historical context (present and future) (Klafki, 2000).

Moreover, the teacher searches for exemplary forms (narratives, dramas, stories) – which are embodiments of educational substance. Teaching can be characterized in terms of a double unlocking. By means of exemplary forms, the teacher unlocks the educational potential of content for students. Likewise, the student opens up or unlocks himself or herself for what is unlocked or disclosed. In other words, teaching ‘opens up a world for the student, thus

opening the student for the world’ (Hopmann, 2007: 115; Klafki 2000). This will be further explained in the following section, with reference to Klafki’s model of lesson planning or the five-step set of questions.

Getting beyond the competency discourse and the infusion strategy

In what follows the author discusses what it means to go beyond the competency discourse and the infusion strategy from the perspective of *Bildung*-centred *Didaktik*.

To invoke the concept of *Bildung* is to argue that education is not just about equipping students with the knowledge, competencies or skills, and values needed for life and work in the twenty-first century. It is also about the formation of the autonomous, self-determined, and morally- responsible individual through the cultivation of human powers and dispositions. The cultivation, broadly construed, can encompass many of the so-called twenty-first competencies – such as communication, problem solving, critical and innovative thinking, and creativity (Carlgren 2005; Willbergh 2015). The cultivation can be achieved through interactions of students with the ‘world’ represented by various forms of knowledge in academic disciplines and related fields.

It is time to reclaim the place and significance of knowledge in education and curriculum, given that the ‘knowledge question’ has disappeared from current global trends in educational policy and practice, due to an excessive preoccupation with competencies and learning outcomes (Yates and Collins 2010; Young 2009). In this regard, Michael F. D. Young (UK-based sociologist of curriculum) and his colleagues have been at the forefront of ‘bringing knowledge back in’ to the recent global discourse on curriculum policy and practice (Young 2008; Young 2013; Young and Muller 2015). As the best knowledge human beings can develop, disciplinary knowledge is ‘powerful’ because it provides students with the ‘best’

understanding of the natural and social worlds. This knowledge enables them to move beyond their particular experience, to envisage alternative and new possibilities, and to participate in social and political debates (Young 2013; Young and Muller 2013). Furthermore, as argued in this chapter, various forms of knowledge in academic disciplines and related fields are embodiments of powerful perspectives, dispositions, and ways of knowing and interacting the world; they constitute indispensable resources for cultivating human powers. A challenge for curriculum developers, then, is to select and organise the knowledges into curriculum content in a way that can contribute to the development of human powers in classrooms. As an illustration, two approaches to the selection and organisation of content are presented below.

One approach, informed by Young's conception of powerful knowledge noted above, deals with conventional school subjects like mathematics, science and geography. In school geography Maude (2018:181-183) identified five types of geographical knowledge which have potential for developing human powers:

- knowledge that provides students with “new ways of thinking about the world”
- knowledge that provides students with powerful ways of analysing, explaining and understanding
- knowledge that gives students some power over their own geographical knowledge
- knowledge that enables young people to follow and participate in debates on significant local, national and global issues, and
- knowledge of the world.

These five types of geographical knowledge constitute a set of criteria for the selection of content. Furthermore, the content is organised around four key concepts, *place*, *space*, *environment*, and *interconnections*. This way of selecting and organising the content of

school geography make possible students' encounters with powerful geographic knowledge in a manner that contributes to the development of human powers – in terms of being able to:

- discover new ways of thinking
- better explain and understand the natural and social worlds
- think about alternative futures and what they could do to influence them
- have some power over their own knowledge
- be able to engage in current debates of significance, and
- go beyond the limits of their personal experience. (Maude 2017: 30)

Another approach, informed by *Bildung*-centred *Didaktik*, is in support of the the selection and organisation of knowledge content centring around contemporary significant issues and themes (e.g., inequality, sustainability), the treatment of which requires contents derived from various academic disciplines, knowledge fields, and related sources. The task of curriculum making is to identify and select elemental concepts that 'can serve to open the students to understanding the major challenges in contemporary society and formulating those challenges as key questions of our times' (Willbergh 2016: 115). In critical-constructive *Didaktik* (a further development of *Bildung*-centred *Didaktik*), Klafki advocated the use of epochal key problems (peace issues, environmental problems, societal inequity within and across nation-states, hazards and possibilities of information and communication technology, and experiences with love and sexuality) as a key frame of reference for content selection and organisation. The exploration of these problems, which requires perspectives from multiple disciplines and sources, provides opportunities for students to acquire 'state-of art knowledge' which equips them 'to handle complex societal issues today and in the future' (Bladh, Stolare and Kristiansson 2018: 400). Furthermore, it creates opportunities for them to cultivate self-determination, co-determination and solidarity,

among other human powers (Klafki, 1998). A further discussion of these two approaches can be found in Deng (2022).

When the cultivation of human powers is a central concern, classroom teaching is not about helping students acquire knowledge, skills, and values. Rather, it is about bringing about a meaningful encounter between students and content which can give rise to opportunities or possibilities for students to cultivate intellectual, moral and social powers and dispositions. The teacher is a curriculum maker in the sense that he or she interprets and translates the content to bring about opportunities as such. Klafki's (2000) five-step set of questions – formulated to facilitate teachers' curriculum or *Didaktik* thinking directed toward the unlocking of the educational potential of content in classrooms – remains useful in today's context.

1. What wider or general sense or reality does this content exemplify and open up to the learner? What basic phenomenon or fundamental principle, what law, criterion, problem, method, technique, or attitude can be grasped by dealing with this content as an “example”?
2. What significance does the content in question, or the experience, knowledge, ability, or skill, to be acquired through this topic, already possess in the minds of the children in my class? What significance should it have from a pedagogical point of view?
3. What constitutes the topic's significance for the children's future?
4. How is the content structured (which has been placed in a specifically pedagogical perspective by questions 1, 2, and 3)?
5. What are the special cases, phenomena, situations, experiments, persons, elements of aesthetic experience, and so forth, in terms of which the structure of the content

in question can become interesting, stimulating, approachable, conceivable, or vivid for children of the stage of development of this class? (151-157)

Questions 1, 2, and 3 are concerned with identifying the elemental elements (of the content) and unpacking the educational potential for developing human powers and dispositions. They enable teachers to interpret and reinvent the meaning and significance of the content in a particular instructional setting, with a particular group of students in mind. Questions 4 and 5 are geared to searching for means of realising the potential in terms of content structure and pedagogical representations – which support and facilitate students’ encounter with the content in ways that open up manifold opportunities in which their understanding and thinking are challenged, and their intellectual, moral, and social powers are fostered. A discussion of how to use Klafki’s model to help student teachers learn to explore the potential of content in geography for human powers is provided by Swedish educationist Gabriel Bladh (Bladh 2020; also see Deng 2022).

Concluding remarks

This chapter has examined how twenty-first century competencies are recontextualised into educational aims and translated into the national curriculum in Singapore and, in so doing, has questioned the competency discourse and the infusing strategy for translating competencies into the curriculum. It has argued that *Bildung*-centred *Didaktik* provides an alternative, curriculum way of thinking about competencies and translating competencies into the curriculum which can overcome the inherent issues and problems associated with the competency discourse and the infusing strategy. *Bildung* centred *Didaktik* foregrounds the importance of disciplinary-based content – rather than generic skills – and of positioning students as subjects of their own rights for developing human powers. Nevertheless, how this

way of thinking is translated into curriculum policy, into syllabus documents, and into classroom practice in Singapore or other Asian-Pacific countries is a far more complex question which is beyond the scope of this chapter. The intent of this chapter is to invite policymakers, curriculum developers, educators, and researchers in the Asia-Pacific region to think beyond the current competency discourse and competency-based approaches to the curriculum, using curriculum and educational language as offered by the German *Didaktik* tradition. A lot of work—both research and development – needs to be done if we are to pursue and actualise this alternative way of thinking (see Deng [2022] for a further discussion).

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