

# Exploring 'Future three' curriculum scenarios in practice: Learning from the GeoCapabilities project

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## Abstract

This paper has its origins in the EU Comenius funded GeoCapabilities project. From its outset, the project developed and researched the notion of powerful disciplinary knowledge (PDK) as an underlying principle of curriculum making in the context of secondary school geography teaching. The work, led from the UCL Institute of Education and involving school teachers, teacher educators and other stakeholders across eight mainly European jurisdictions, was framed by Young and Muller's 'three educational scenarios' (Young & Muller, *European Journal of Education*, 45, 2010 and 11). The three futures heuristic is discussed as a means to distinguish qualities of curriculum thought. Future 3 scenarios, which posit teachers as curriculum makers with responsibility to engage in essential 'knowledge work', provide a principled platform on which to develop ambitious educational classroom encounters. Knowledge working with PDK and (as we go on to argue) other powerful ways of knowing the world, is seen as a bridge between social realist epistemological principles and practical classroom content selections. This opens the possibility of responding to Deng's (*Journal of Curriculum Studies*, 54, 2022) call for developing practical theories of content with teachers. Although the authors are geographers in education drawing on different international perspectives and traditions, the paper addresses matters of interest applicable to a variety of specialist subject domains across the secondary school curriculum.

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**KEYWORDS**

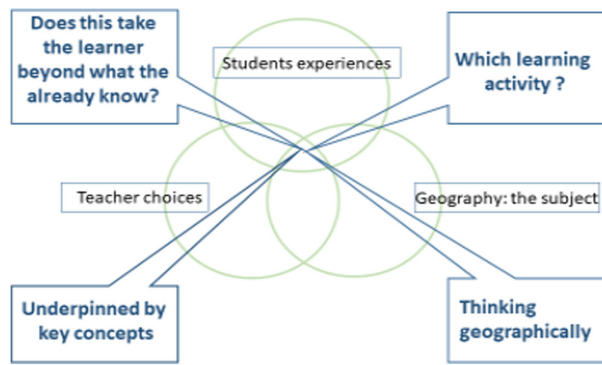
curriculum making, future 3 scenarios, GeoCapabilities, geography education, powerful disciplinary knowledge, theories of content

## INTRODUCTION

This article presents an argument concerning the relationship between pedagogical and curriculum thought in the context of secondary geography education. We argue that high-quality teaching is inseparable from the quality of curriculum thought. The argument is made not in a generalised way but in the context of the development and research framework developed through the GeoCapabilities project (Biddulph et al., 2020; Bustin, 2019; Lambert et al., 2015; Lambert & Morgan, 2010; Mitchell et al., 2022; Uhlenwinkel et al., 2016). GeoCapabilities is based on a normative, theoretical perspective known as “the capability approach” derived from Amartya Sen (1985) and later with Martha Nussbaum (Nussbaum & Sen, 1993). In welfare economics, capabilities focus not on crude metrics of development or well-being such as income per capita, but on human capacities to be and to do: thus, human capabilities take us beyond the somewhat reductionist discourse of competence and skills (Hinchliffe, 2007) towards notions of human freedom. The project proceeds from the idea that geography education (as with other subjects) can contribute to developing the intellectual capabilities of children and young people.

The school subject of geography has the potential to enable students to think deeply about the earth and their relations with the world by focusing on perspectives of place and space, society–nature relationships and environmental futures. Engaging with such geographical knowledge empowers students, having the potential to develop their capability to think geographically. Thinking geographically, one of the main outcomes of a conceptual approach to teaching geography (Lambert & Morgan, 2010), can take students beyond their everyday experience and understanding because geographical ideas, concepts and perspectives help us to see the world in new ways, and can provide specific, powerful insights. Similar claims can of course be made for other subject domains of the school curriculum: thinking historically, scientifically and so on. In this sense, the capabilities approach may hold potential in developing properly nuanced interdisciplinarity in the school curriculum—the subject of another paper maybe as here the focus is on secondary geography.

The fundamental argument we wish to develop in this article flows from these introductory comments: that debates concerning quality in geography teaching must remain firmly rooted in the curriculum. In other words, although conceptually the domains of curriculum (what should we teach?) and pedagogy (how should we teach?) are distinctive, a point stressed by Young (2013), Young et al. (2014), in practice the distinctions need to be blurred—perhaps the key point made by describing teachers as ‘curriculum makers’ (see Figure 1). Here the quality of the teaching hinges on the content selections and the knowledge of the students being taught as much as on the teaching strategies and techniques chosen—which must, at the very least, be fit for purpose. Thus, the main concern of the GeoCapabilities project from its earliest developmental stages was to conceptualise teachers as curriculum makers. In Section “The significance of curriculum thinking and curriculum making” of the paper, we enlarge on and justify this and in so doing hope to merge and lock together the iterative and close relationship between curriculum and pedagogy. We follow this in Section “Curriculum making and teachers’ knowledge work” with a deeper exploration of the so-called ‘knowledge turn’ and its significance in geography education and how this has influenced how the GeoCapabilities project subsequently developed, with a summary (in Section “Exploring the



**FIGURE 1** The curriculum making model for the school subject geography (Lambert & Morgan, 2010, p. 50).

contribution of GeoCapabilities”) of its theoretical and practical contribution to curriculum making.

The final sections of the paper go on to enlarge on the initial claims concerning the merits of so-called Future 3 curriculum scenarios (after Young & Muller, 2010; Young et al., 2014). This not only responds to Deng’s (2022) call for teachers to engage more overtly with ‘theories of content’ in what they attempt to teach but expands considerably the parameters and purpose of teaching itself. Future 3 curriculum scenarios are potentially emancipatory, and offer an ambitious and fit way to frame geography teaching in the context of contemporary epochal societal and environmental challenges (Lambert, 2013, 2023; Morgan, 2012). The aim with this paper is to further explore the path towards Future 3 curriculum thinking, through summarising and reflecting on perspectives and experiences from the work with GeoCapabilities, focusing especially on teachers’ knowledge work.

## THE SIGNIFICANCE OF CURRICULUM THINKING AND CURRICULUM MAKING

Disciplines such as geography produce continually developing specialised knowledge of a changing world. To provide students access to such ‘powerful disciplinary knowledge’ (PDK) (Lambert et al., 2015), is *such* an important function of the school curriculum that protagonists claim it to be a matter of social justice (Young, 2008; Young et al., 2014; Young & Muller, 2016). Furthermore, academic disciplines such as geography are actively involved in understanding and addressing several epochal challenges all of which need to be examined through the complexities of the existential climate emergency. These include, for example, decolonization, grotesque global wealth inequalities and rising levels of international migration. It follows therefore that geographical knowledge and perspectives taught in school can (at least in theory) have transformative potential for young people because it can enable them to think in new ways—enabling students, in Bernstein’s memorable phrase “to think the unthinkable and the not yet thought” (Bernstein, 2000, p. 30). But first, such disciplinary knowledge needs to be recontextualised into a coherent curriculum, which includes embedding it in the context of intertwined educational goals. Furthermore, as we shall see in section “Curriculum making and teachers’ knowledge work”, PDK is not the only way of knowing that may be considered powerful: indigenous knowledges, local community knowledges and knowledge gained through experience—all may play a significant role in contributing to students’ identities and their intellectual capabilities. Thus, disciplinary ideas, concepts and processes need to be transformed into teaching content which manages to engage

with students from culturally and socially diverse backgrounds so that teachers can create meaningful educational encounters. As Mitchell (2020) has shown, this aspect of teachers' work is challenging in our "hyper-socialised" present, but possible and important to cherish and develop.

The model focuses mainly on the many choices that need to be made when the practitioner interprets and shapes their teaching from, say, an official curriculum document. It refers to the constellation of both intellectual and practical processes that lie behind curriculum enactment. The perspective behind curriculum making thus assumes that the teacher has achieved professional agency (Priestley et al., 2015): they make conscious, reflective choices in their professional practice, and do not simply "deliver" prescribed and predetermined content. In contrast, agentive curriculum makers build a curriculum of "engagement" both with what students bring *and* with the subject discipline. The model therefore stresses the importance of curriculum as process, in which the planning phase strategically highlights the educational significance of the subject, which in turn governs the choice of teaching themes and content. The process assumes that the questions of "why teach this or that?" and "what precisely shall I teach?" have precedence over the more technical (but still essential) pedagogical questions such as "how shall I teach this?". Such a vision of teaching is by far from universally accepted not least in schools adopting centrally prescribed scripted lessons and where teaching is understood to be primarily a technical delivery operation. In adopting curriculum making as a principle, the GeoCapabilities project attempted to demonstrate how such curriculum thinking can be enabled, communicated and implemented in practice. This is through the use of tools as curriculum "vignettes" and "artefacts" which we describe in Section "Exploring the contribution of GeoCapabilities" of this article.

A valuable aspect of the GeoCapabilities project was that it was made up of continental European, US and UK partners. Different interpretations of basic concepts and terminology such as curriculum and instruction were obvious from the beginning: in effect, the project became a space in which Anglo-American curriculum traditions met north European traditions of didactics. The basis of curriculum making is the didactic triad; teacher, student and content, highlighting the need for a relational perspective between these interests when framing teaching and learning. Interestingly, Johan Muller (2022) points to how the concept of powerful knowledge has come to serve as a conceptual bridge which might help bring together insights drawn from the apparently different worlds of curriculum and didactics. Thus, both Anglocentric research that has sought to identify principles for why and how curriculum content should be selected and structured *and* German research in subject didactics that has the ambition to contribute to the development of knowledge practices (see Bladh et al., 2018) for teaching and learning, share similar concerns. Dialogues between the curriculum and *Didaktik* traditions have a longer history (see for example Gündem & Hopmann, 1998), but it is significant that several researchers have now linked discussions about powerful knowledge with the writings of Klafki and his framing of categorial Bildung (Bladh, 2020; Deng, 2022; Willbergh, 2016). For example, Deng (2021) argues that the German *Didaktik* tradition exemplified by Klafki, together with Schwab's (1969) *The Practical: a language of curriculum*, provides a promising approach to revitalise educational theory.

Deng (2022) suggests that refreshed curriculum thought, designed to improve educational practices, needs to develop both a theory of knowledge at a general level *and* a theory of content at a more specific level. While the 'knowledge turn' in Anglo curriculum theory has focused on defining and clarifying curriculum and epistemological principles on a general level (what Muller (2022) refers to as *theories of curriculum*), it has also inspired subject-specific responses (*theories for the curriculum*). In geography education, early work in the GeoCapabilities project has been foundational, but it has also inspired further work in the geography subject community (Bladh, 2020; Maude, 2016; Vernon, 2020). Scholars in history education have also responded (Chapman, 2021). Such developments have features

in common with how Klafki's *Bildung* theoretical work, especially his early work on categorical *Bildung*, has inspired and further developed thinking in subject didactics, for example, through the extensive research inspired by the model of didactic reconstruction (Duit et al., 2012). While there are apparent differences in the developments taken here, there are clear commonalities between these intellectual traditions in the way general principles need to be set in a subject-specific context in order to become distinctive and applicable for curriculum design and specialist subject teaching.

As Darling-Hammond (2021, p307) states “evolving definitions of teaching quality around the world increasingly see teaching as rooted in a wide-ranging knowledge base that combines an understanding of content, pedagogy and learners which is focused on meeting students' diverse social, emotional and academic needs – rather than just covering the curriculum”. Thus, teaching is complex and context-dependent and the very idea that ‘covering the curriculum’ would come anywhere close to capturing the knowledge work that falls to teachers is anathema to how we conceptualise teachers as curriculum makers. In the next section we turn towards a deeper exploration of questions relating to knowledge work.

## CURRICULUM MAKING AND TEACHERS' KNOWLEDGE WORK

Official curriculum documents, consisting of carefully selected and usually sparse words, rarely ‘sing’ and are frequently as dry as dust. Teachers need to interpret the words on the page, not only to realise their significance and forecast where neophytes may have conceptual or contextual difficulties but also to spot promising ‘ways in’ to selecting and teaching potentially significant content. This process of interpretation is referred to by Lambert and Morgan (2010) as ‘knowledge working’ (pp. 54–62). To undertake this work effectively, it is helpful for teachers to be aware of the epistemological principles that influence and guide it, for this enables them to unlock “... the educational potential of the content ... for developing human powers” (Deng, 2022, p. 599). This is the essential work that appropriately prepared and supported teachers can undertake in the liminal space between the institutional curriculum and the level of curriculum enactment. In this section then, we take a slight detour in order to open up some general epistemological matters before moving towards more specific matters relating to the geographical subject domain.

We start from the unassailable truth that all knowledge, being of human creation, is *socially* constructed, including specialist, disciplinary knowledge produced and communicated in institutions such as universities. None of this sociality is neutral or necessarily benign, of course, and the circumstances of knowledge production are important to recognise: the imperial origins of UK geography as a discipline and school subject in the nineteenth century and its subsequent development throughout the twentieth century to the present day offers a useful portrayal of this (see Morgan & Lambert, 2023). Indeed, it is also very important to ask questions about the warrant of knowledge: how do disciplinary communities know what they claim to know? Can claims to knowledge be trusted? In an era of post-truth and post-literate politics such questions have never been more important to grasp and address, but of course these are ancient questions. In the past religious belief sufficed to distinguish between authoritative, ‘sacred’ knowledge from the locally variable, sensually based ‘profane’ knowledge of experience (Durkheim, 1995). In the modern period the sacred is, broadly interpreted, the world of science with its established procedures and techniques to establish the warrant of its knowledge claims. It is worth noting that just as religion and/or superstition could never replace expert knowledge acquired by acquaintance and experience—how to till the soil, where to build homes that were safe from flooding and so on—‘powerful knowledge’ derived from science rarely if ever provides the final word on contemporary issues



ranging from public health matters to building sustainably. It is now increasingly realised that the hubris of 'western' science is a problem in that it may smother other ways of knowing, including indigenous knowledges, for example. This is not to reject claims of dependable, scientific knowledge as western colonialist plotting, but to accept that in the knowledge business, open mindedness and critique is vital. This has implications for the school curriculum, and how we teach.

The knowledge questions briefly opened up in this section so far illustrate the enduring differences between so-called 'traditional' and 'progressive' preferences in education, frequently articulated in only binary, polarised ways. Teachers are caught in the middle of such tensions especially when the argument outside school become overtly political. Inside school, teachers' best defence is to remain positively engaged as educational knowledge workers and curriculum makers. Adopting a positive disposition such as this is advocated by the GeoCapabilities approach which envisages 'knowledge rich' curricula that foreground "the emancipatory power and purpose of education in initiating all young people into forms and fields of specialised knowledge and powerful thought" (Lambert, 2016, p. 392). However, Deng (2022) appears to question whether the theories of capabilities and powerful knowledge are compatible. The irreconcilable issue for Deng, which in a sense is a reformulation of the polarised 'one or the other' tension noted above, is about which perspective to prioritise, the transmission of knowledge (for its own sake) or the cultivation of capabilities? As he states, "... the teaching of knowledge does not necessarily or automatically give rise to the development of human capabilities" (p. 605). This is a truism for there are no guarantees when it comes to educational encounters. However, Deng concedes that bringing the two together may indeed be possible, but dependent on "... a particular *Didaktik* (or curriculum) way of conceiving the significance of knowledge ... and of unlocking the educational potential of content in classrooms." (p. 605).

The connection, noted in the previous section, that Deng makes between Anglo-centric discourse on curriculum and German-Nordic perspectives on *Didaktik* is therefore important and potentially highly productive. Indeed, GeoCapabilities project partners were conscious from the beginning of the similarities between the three-part Venn diagram that captures 'curriculum making' (Figure 1) and the 'didactic triangle' of student–subject–teacher relations (Bladh, 2020; Gericke et al., 2018). However, it is the connection with Klafki's formulation of *categorical Bildung* that is perhaps yet more significant and interesting. Sjöström and Eilks (2021) provide a clear summary of Klafki's contribution to the historical, complex and difficult to translate concept of *Bildung*, in which they distinguish, *formal Bildung*, which generally Klafki prioritised, from *material Bildung*. The former emphasises the development of the whole person, their competences and what we might call life skills, but embedded in a concept of human potential to develop as an independent individual. Material *Bildung*, however, stresses content knowledge. It is in line with versions of liberal education mainly focusing the canon of topics and assumes that much of this essential core knowledge is scientific and objective. In a sense then, the contrast between the two is partly epistemological, for in material *Bildung* "the objective is prioritized over the subjective" (ibid, 59). The distinction is also based on the assumed relationship between what is known and the knower, and thus the need to cultivate the appropriate skills and dispositions in the learner. In summary, a key distinction then between the material and formal types of *Bildung* is the shift of emphasis from the teaching (and the teacher) to the learning (and the learner) and, as we shall see, there is a parallel here between Young and Muller's Future 1 and Future 2 curriculum scenarios.

Klafki's formulation of *categorical Bildung* emphasises *both* content and the skills development in the learner. In other words,

He suggested that any learning activity should contribute to both material and formal gains in the learner. He suggested selecting content that is elementary and basic for the discipline; that is fundamental for essential experiences of and insights into the world; and that has exemplary significance to offer structure for understanding the field of study.

(Sjöström & Eilks, 2021, p. 59)

This statement suggests a starting point for what we might call the material 'knowledge work' in teachers' curriculum making. In addition, teachers need to focus on the formal developmental aspects of the students which, according to the authors, Klafki characterises consisting of three elements or abilities: self-determination (to be able to take up one's own interests as part of society); participation (to be able to actively participate in and contribute to the development of society); and solidarity (to act responsibly in society with regard to those whose opportunities are limited or impaired). This list is redolent of human 'capabilities' such as those identified by Nussbaum (2006)—and indeed those discussed early on the GeoCapabilities project, a point which we will return to.

Categorical Bildung which, as it were, synthesises across both the material and formal elements is closely connected to the German tradition of *Didaktik* which underpins the proposition that education is not just about content coverage or finding the most effective pedagogic means to instruct and deliver authorised content. It is also about the grounds for selecting what to teach and how such selections are justified. Thus, it asserts not only the importance of relating epistemological principles to practical matters such as content selection and deciding how to teach, but philosophical questions about why teach subjects, including geography, in the first place. Klafki (2000) raised a number of questions for teachers to consider in support of such a process, for example, about the *significance* to the learner of the content being taught, in particular for their futures; and, what the content matters help reveal or open up to the learner that otherwise would remain beyond their reach. The latter in particular resonates with the concept of 'powerful disciplinary knowledge' which enables the student (to repeat Bernstein's memorable phrase) to 'think the unthinkable and not yet thought'.

Whether we come to the knowledge work that must fall to teachers through the Anglocentric curriculum route or via Germanic-Nordic Didaktik analysis, we can see that these different intellectual traditions are strongly connected. With the benefit of some reflection, the trajectory of GeoCapabilities may be said to have shown a strong affinity to categorical Bildung, even though this was not fully acknowledged at the time of the project. It is to this project we now turn.

## EXPLORING THE CONTRIBUTION OF GEOCAPABILITIES

In Lambert and Morgans (2010) exploration of the conceptual foundations of school geography they discussed in some detail the need to relate the content of geography with an expression of its educational potential. The device chosen, the 'capability perspective' (see also Lambert, 2009), anticipated the GeoCapabilities project, and it is worth noting how the authors at that time justified this choice. Their concern was to express geography's educational role in a way that stressed not only its enormous catalogue of what they dubbed extensive knowledge (place names, landscape features etc.) analogised as the subject's 'vocabulary'. In addition, they wanted to stress the subject's 'grammar', the more intensive knowledge of concepts, generalisations and abstractions which seeks to deepen understanding. Vocabulary and grammar of course work together and one without the other is fundamentally impaired. When successfully working together the 'language' of geography enables us to think and communicate in a distinctive way—through thinking geographically

(Lambert, 2017; Morgan, 2018). That such a thing is worthwhile is perhaps an unremarkable claim, for as the prominent geographer Ron Johnston (1985) long ago noted "... knowledge about the earth as the home of humankind ... is considered desirable in a well-educated society" (p. 6). However, pulling it off is not straightforward. The capabilities approach, with its focus on the knowledge work of teachers and their role as curriculum makers, was, if nothing else, a reminder that achieving the educational potential of the subject was both important and a daily classroom challenge. In their discussion entitled 'geo-capability' Lambert and Morgan write:

... we have tried to show that geography consists of both extensive and intensive knowledge without which individuals and society may be considered educationally impoverished ... a form of capability deprivation. Having created this thing called geography, which is a particular way of seeing and investigating the world ... it is up to teachers and geography educationists to use it in such a way that it contributes to young people's capability.

(Lambert & Morgan, 2010, p. 64)

Capability, they argued, provided a framework for clarifying how geography relates to broader educational goals. Drawing mainly on Nussbaum (2006) they identified three aspects of capability to which high-quality teaching could contribute, enabling to young people to function effectively in the world. These were capabilities enhancing individual freedoms (to think autonomously for example); enabling and making choices of how to live (what citizenship means for example); and being creative and productive in society. It is interesting in retrospect how closely these resemble Klafki's formal elements noted in the previous section.

In an attempt to mesh what we might now recognise, using Klafki, as the formal and the material aspects of teaching, Morgan and Lambert attempted to re-state the broad purposes of geography in school through a capability lens—an equivalent possibly of Klafki's categorical *Bildung*. They write,

... a capability perspective on geography in education evokes a subject that can contribute to young people's

- 'world knowledge'
- relational understanding of people and places in the world
- propensity and disposition to think about alternative social, economic and environmental futures. (p. 65)

This summary remains an ambitious vision of geography as powerful knowledge partly because it is highly suggestive of the different epistemological assumptions (implying different kinds of knowledge and ways of knowing) that lie across all three items in the list, which teachers, as curriculum makers, need to work with and combine.

We now provide a brief account of how this vision was developed and researched in the GeoCapabilities project and in the following section the focus on the emerging importance of visioning curriculum making through Future 3 scenarios. The project (<https://www.geocapabilities.org>) aims at opening up the educational potential of the geographical discipline, through working with teachers, teacher educators and professional geographers, to identify its 'powerful disciplinary knowledge' (PDK). As the GeoCapabilities 3 online resource page states:

The project sees geographical knowledge as a powerful educational resource when the child's needs are foregrounded, 'enabling' them in many ways – for



example, to participate in big debates, sort truth from fiction, know their world at different scales and to open real choices about how to live.

(<https://www.geocapabilities.org/geocap3-3phases/>)

The project extended over three phases from 2012 to 2021. Phase 1 and 2 of the project, the pilot and main conceptual phases, respectively, focused on geography teachers as curriculum leaders based on their understanding of and engagement with 'powerful disciplinary knowledge' (PDK). What emerged was a common international framework illustrating how, despite national borders and resultant differences in national curricula, the broader aims of geography education are shared across national borders (Lambert et al., 2015). Phase 2 developed an online platform supporting European collaboration (and beyond, with associates elsewhere in Europe, Japan and China) focusing on the professional development of geography teachers and their capacity to utilise a capabilities approach in their curriculum thinking.

The main purpose of GeoCapabilities 3 (2017–2021) was to examine practical applications of the approach, specifically in schools seen as 'challenging', often situated in areas of socio-economic deprivation. In such schools, teachers often work with additional external pressures and even surveillance as a result of unhelpful labelling as 'failing' or 'underperforming' (Biddulph et al., 2020). The notions of social justice embedded in capabilities (and indeed PDK), make the application in these settings significant. Phase 3 was a collaboration between the European Association of Geographers, university partners, a school and 14 teachers in five countries (England, Belgium, France, the Netherlands and Czechia). International migration was chosen as the central topic for all the participants' curriculum making: the topic is taught in all jurisdictions and is seen as a very relevant issue in European societies, with many of the students attending participating schools having their own recent and direct experiences (Biddulph et al., 2020). Furthermore, it is an important research theme in academic geography. In Klafki's terms, migration can be seen as an 'epoch typical' key problem (Bladh et al., 2018).

In a preparatory phase, schools were visited. Interviews held with teachers to identify their practices, ideas and interests in teaching migration. Teachers pointed to several challenges they face, from severe time constraints and the sensitivities required managing the diversity of voices in the classroom, to the difficulty students face understanding abstract migration concepts—sometimes caused by lack of vocabulary, and occasionally having to confront stereotypical representation of migrant groups and neighbourhoods in teaching materials. In summary, teachers were able to see the potential of geography to help young people better understand various aspects of migration but were frustrated by poor access to resources and the felt constraints under which they worked. In summarising the preparatory phase, Biddulph et al. (2020, p. 271) concluded that:

[...] some principles start to emerge, which can form the basis for future work – and which reflect the intentions of GeoCapabilities. These include: the significance of developing the teacher's own PDK in order to support the teacher's agency for curriculum making; the importance of respecting students' everyday knowledge if their values and attitude towards migrants and migration are to be challenged in appropriate ways; utilising the relationship between the everyday and disciplinary knowledge to inform pedagogical developments and supporting teachers appropriately, including with access to academic geography.

In addition, 12 academic experts in migration studies were also interviewed to identify state of the art knowledge in the field. It was not too difficult to identify a number of important differences between migration as taught in schools and the evolving ideas and new knowledge emerging from academic geography. Again, in summary and in the context of

the project, some important lessons were learned from these interviews: migration is to be understood as part and parcel of life, thus a dynamic phenomenon (instead of a static one), placed in the context of globalisation and technological change and with a (teaching) perspective of transnationalism (instead of the receiving country) (<https://www.geocapabilities.org/migration-survey-academics/>).

The subsequent main phase of the GeoCapabilities 3 project was to develop a set of pedagogical principles incorporating the practical application of PDK in teaching and learning geography. The *GeoCapabilities approach* emerged as a cyclical process with the teacher returning to the discipline (Mitchell et al., 2022, p. 166) through four steps shown in Figure 2.

What can be learned from this cyclical process? Significantly we think, the *vignette writing* was indicated as an essential and especially productive element of the GeoCapabilities approach (see <https://www.geocapabilities.org/vignettes/>). A vignette is a brief example of PDK in the context of a geography lesson—not a lesson plan, but a brief outline of how the lesson ‘works’ in relation to its aims and content selections. Teachers wrote vignettes on key topics they felt would improve their teaching about migration and which could be of interest to their students, for example, representations of migration flows and perceptions of migrants, and the concept of home (Mitchell & Béneker, 2022). For teachers this was the mechanism that enabled the knowledge work that must precede lesson planning. It supported them in their deeper thinking about geography, while at the same time keeping educational goals and purposes in mind. Thus, composing vignettes:

- helped teachers to clarify their thinking about migration (and its wider consequences);
- supported innovative planning by teachers exploring and thinking critically about current approaches to teaching migration;
- helped the teachers to better understand social and educational issues related to migration;
- led teachers to restructure these lessons and units, identifying new opportunities to scaffold learning.

In summary, the GeoCapabilities approach helped teachers “... make their teaching selections about migration, powerful and meaningful. Important for this was opening up access

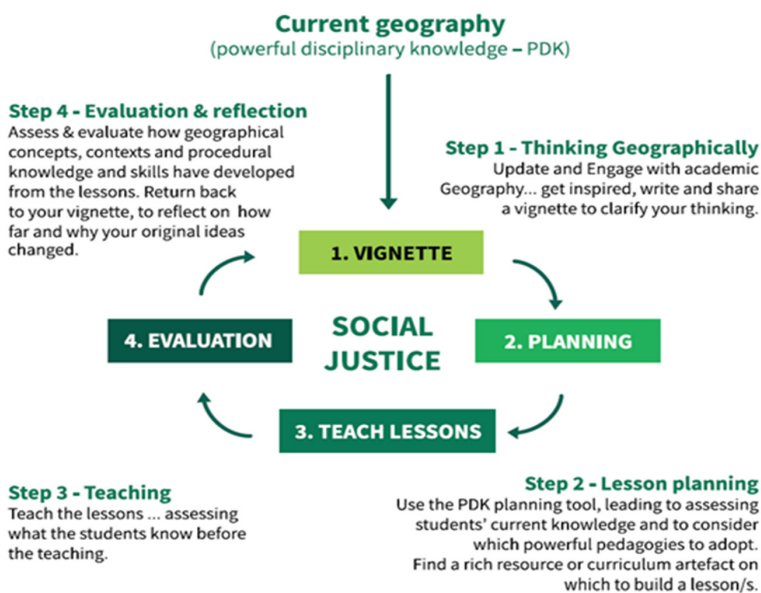


FIGURE 2 The GeoCapabilities process in practical steps.

to academic knowledge and collaborative thinking on pedagogy with education researchers. Moreover, the teachers used the opportunity to link their teaching to their ideas of students' needs." (Mitchell & Béneker, 2022, p. 194). The GeoCapabilities approach claims to be distinctive. The main claim set out at the beginning of this paper is that the GeoCapabilities approach supports Future 3 curriculum making. It is to the substance of this claim we now turn.

## EXTENDING THE POTENTIAL OF 'FUTURE THREE' CURRICULUM THINKING

One of the themes to run through this paper is the importance of teachers' agency and the nature of work that enables teachers to achieve this (Priestley et al., 2015). Our concern has been to examine the knowledge base that supports the actions of teachers as 'curriculum makers' by an explicit acknowledgement of their role as 'knowledge workers'. In this section, we return to the art of practical teaching and the vital relationship between curriculum thinking and 'pedagogy'.

It is in this context that the three future scenarios heuristic—and 'Future 3' (F3) curriculum thinking in particular—becomes a productive means to 'frame' practical curriculum making. As we shall see in what follows, F3 represents an ambitious and demanding take on teaching. It has enormous implications for teacher identity and for how teachers are trained and inducted into their work. F3 thinking may even appear daunting. However, in view of the contemporary conditions of what has been called 'radical uncertainty' (Emmot, 2022), which include calls to decolonise knowledge, the emergence of post-truth populist politics, geopolitical shifts with the emergence of China and of course existential issues associated with the global climate emergency, the only appropriate response is to raise the ambition of education, which may include a reassessment of how teaching itself is understood.

So, what exactly is 'F3'? Following Michael Young's proposition of powerful knowledge (Young, 2008), he and his collaborator Johan Muller published a paper outlining 'three future educational scenarios' (Young & Muller, 2010). This was designed to show how different theories of knowledge result in contrasting educational scenarios. It is, in effect, a very useful heuristic and serves as a device in order to compare possible curriculum outcomes.

Future 1 curriculum scenarios: the 'traditional' school model, based on a given and inert selection of *delivered* knowledge-as-fact. This grossly under-socialized view of knowledge risks becoming rigid and unresponsive. It is a conservative curriculum: preserving both existing knowledge and its unequal distribution. Future 1 curriculum assumptions are therefore unsuitable for democratic, high-quality education. Future 1 tends to promote the knowledge of the powerful, which appears as alienating to many.

Future 2 curriculum scenarios: can be understood as the 'progressive' reaction to Future 1. Future 2 is typically generic and considers curriculum content to be arbitrary and flexible. This is an over-socialized model, encouraged by post-modern thinking in the late twentieth century, and risks becoming knowledge averse, ignoring the strengths of domain-specific specialised knowledge. However, it is motivated by an inclusive democratic principle, being shaped by the interests, purposes and needs of all students as future citizens.

Future 3 curriculum scenarios: a progressive social realist model that assumes that the world is real and knowable. New knowledge is socially produced in specialised communities such as academic disciplines and open to change as the disciplines themselves are challenged, contested and evolve. Related school subjects are maintained (at least in part) by teachers. Future 3 envisions high quality, productive *engagement* (by teachers and students) with dynamic 'powerful disciplinary knowledge' (PDK). F3 is emancipatory

not conservative (and in some senses can be imagined as some form of synthesis of F1 and F2).

Both F1 and F3 scenarios describe 'knowledge rich' curricula, but with radically contrasting qualities in this regard. The nature of geographical teaching and learning in F1 and F3 scenarios is likely to be very different requiring different approaches to knowledge. Thus, in F1 it is given, prepackaged, stable and 'oven ready', in contrast to F3 in which knowledge is dynamic, contingent and needs to be worked with. The major pedagogic challenge (not recognised in the original conception of F3) is how to make the epistemic quality of PDK available to all young people, and to enable them to relate this to other ways of knowing—including knowledge acquired through experience and acquaintance (Winch, 2013) or from indigenous knowledge traditions (Sleeter & Zavala, 2020).

Both the strength and potential weakness of F3, the alternative scenario to both F1 and F2, is that rather like 'PDK' itself, it has not yet been fully developed as an analytical concept: there are no settled lists of criteria or tick sheets to judge 'how F3' is our curriculum. Alaric Maude's contribution, proposing a five-part typology of powerful knowledge in geography (Maude, 2016), has been helpful in showing the scope of 'knowledge work' in geography and crucially, how to avoid 'knowledge rich' curriculum thinking slipping back to F1 teaching. Indeed, there are similarities between Maude's and the GeoCapabilities approach. But there are, by definition, no templates and pre-prepared plans to take off the shelf in order to 'deliver' F3. What is key is that in their own ways, teachers and students need to *engage with* knowledge questions: such as, 'in what ways is this powerful?' and to whom? And crucially, 'how do we know?'—in other words, what gives this, or any, knowledge its warrant (or power)?

One area of development in F3 thinking (again, *not* an aspect envisaged by Young and Muller in their original formulation) is how to combine the selection and teaching of powerful disciplinary concepts with the experiential knowledge that students already possess. This is categorical Bildung: it is not merely a 'pedagogical nicety' (starting 'where the students are' etc.) but a curriculum making issue which goes to the heart of any claim that a F3 curriculum scenario (incorporating PDK) is emancipatory. For F3 to be liberating it surely must be respectful of all contexts and circumstances, including and especially those which may not be versed in the traditions of deferred gratification and other institutional norms that favour some social groups over others. Furthermore, there are questions about how PDK relates to other ways of knowing, for example, those that draw from indigenous and community knowledges. For instance, Andrew Kirby (2020) has recently shown how, in addressing what he calls 'twisted problems' (from the Spanish phrase 'problemas retorcidos') such as climate change, local and indigenous knowledges can offset the 'weaknesses of conventional science' (p3) that offer universalist solutions to what are usually locally or regionally unique place-based problems of flooding, drought, sea level rise and so on. However, as Kirby writes, "Recognizing the existence of local knowledge does not demand that it envelop everything, in the same way that it does not signal a retreat from abstract knowledge" (p 10). In other words, in taking account of different ways of knowing it is expressly not a matter of choosing either/or, but of both/and. In this way, F3 thinking advocates a curriculum of *engagement* as we saw above, including engaging a relational approach to contrasting epistemological traditions. In their book on racism and the geography curriculum Morgan and Lambert (2023) found critical realism, which distinguishes the 'real' from the 'observable' world, a helpful philosophical backdrop to their take on F3 curriculum making.

Thus, we return to the key characteristic of F3 which is its concern to strike an open, contingent and developing *approach* to knowledge and to ways of knowing. F3 teaching is ambitious because it attempts to nurture such an approach with students—that knowledge is contentious, so that 'how do we know what we think we know?' becomes a frequently

asked question. We are saying at one and the same time that the world is ontologically knowable *and* that there are different ways to live and interpret this locally (an epistemologically relativist position). Social realism, with its roots in critical realism (see Huckle, 2017) accommodates this. Rather than dismiss these standpoints as irreconcilable we propose to adopt the challenge offered by Muller (2022) that the utility of powerful knowledge as a construct may lie in its ability to 'bridge' some of the contradictions apparent in so much educational discourse (also Young, 2021). We are under no illusion that this will be easy to accomplish. As with Kirby (2020), we know that '... incorporating local knowledge is hard work' (p14). But we do see this as an exciting and necessary next step, to get beyond the stultifying and destructive binary oppositions that bedevil educational discourse. We argue that reconciling binary positions between curriculum and pedagogy, or between knowledge and skills, is the goal of F3 thinking, achievable through its 'knowledge working'. F3 thinking uses PDK (as developed through the creation of 'vignettes' in GeoCapabilities) as a bridge between the level of epistemological principle and classroom content selection. In this, we may have grounds to claim the possibility for developing with teachers' practical theories of content as called for by Deng (2022).

## CONCLUSION

Reflecting on the three future scenarios, its co-originator Muller (2022, p9) writes that:

The proposal for Future Three envisaged a return to a new 'knowledge-centric' curriculum that would allow for the wider democratisation of specialised knowledge.

The initial presentation of this schema was, in retrospect, rather too stage-bound, with one Future succeeding another as if in natural progression. It is perhaps better to think more dialectically about it. There are aspects in each of Future One and Future Two that were seen as genuinely liberatory at the time and deserve at least consideration in a re-modelled Future Three.

We agree that F3 curriculum scenarios need to be re-modelled, and GeoCapabilities claims to do this, but they are no ready-made panacea. To extend Muller's point above, it is probably true that high-quality teaching has always had many F3 characteristics embodied by the *approach* to knowledge outlined in this paper. In this sense F3 might be seen more a means to restore certain principles of liberal, democratic education committed to opening minds and encouraging critical engagement similar to those embodied by the German tradition of *Bildung*. Furthermore, our claim is that F3 thinking is able to be more understanding of contemporary challenges, not only the requirement that teaching become more community responsive but also that it become more responsive to the epochal questions such as the climate emergency. While we here have focused on geography education, F3 thinking will also mean considering new interdisciplinary approaches (Mitchell, 2022).

Deng (2022) also argues, in support of capabilities, that the curriculum should be "... *future oriented* in the sense that it aims at the formation of autonomous and responsible individuals who can thrive and flourish in the present and future world." (original italic; p. 612). He sets out an ambitious programme of work to achieve this including efforts to clarify "the formation" of school subjects in ways that embrace the knowledges that "have the potential to contribute to human powers". He seeks ways to formulate subject curricula that support—rather than constrain—curriculum making in classrooms "so as to unlock and actualize the potential of the subject". What we have sought to do here is to examine Future 3



as a possible way to frame such work in geography education—through nurturing the idea of thinking geographically for instance.

The next step may be to identify and possibly curate specific empirical research projects that can contribute to the task of substantiating F3 curriculum making. This would include other subject domains and indeed the possibility of exploring inter-disciplinary work in schools. However, it is perhaps worth noting a word of caution: that the kind of empirical work that is appropriate to the approaches to curriculum making explored in this paper will need careful articulation. Just as Klafki's categorical *Bildung* cannot easily be 'proved' in the German context, neither can F3 through the adoption of readily gathered empirical data such as metrics of student attainment and so on. However, there is surely a need to maintain scholarly engagement with what future-oriented education scenarios look like and the role of teachers must play to bring these about.

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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Data sharing not applicable.

## ETHICS STATEMENT

None.

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## REFERENCES

- Bernstein, B. (2000). *Pedagogy, symbolic control and identity (Second ed.)*. Rowman and Littlefield.
- Biddulph, M., Béneker, T., Mitchell, D., Hanus, M., Leininger-Frézal, C., Zwartjes, L., & Donert, K. (2020). Teaching powerful geographical knowledge – A matter of social justice: Initial findings from the GeoCapabilities 3 project. *International Research in Geographical and Environmental Education*, 29(3), 260–274. <https://doi.org/10.1080/10382046.2020.1749756>
- Bladh, G. (2020). GeoCapabilities, Didaktical analysis and curriculum thinking—furthering the dialogue between Didaktik and curriculum. *International Research in Geographical and Environmental Education*, 29(3), 206–220. <https://doi.org/10.1080/10382046.2020.1749766>
- Bladh, G., Stolare, M., & Kristiansson, M. (2018). Curriculum principles, didactic practice and social issues: Thinking through teachers' knowledge practices in collaborative work. *London Review of Education*, 16(3), 398–413. <https://doi.org/10.18546/LRE.16.3.04>
- Bustin, R. (2019). *Geography Education's potential and the capability approach*. PalgraveMacmillan.
- Chapman, A. (Ed.). (2021). *Knowing history in schools: Powerful knowledge and the powers of knowledge*. Knowledge and the Curriculum Series. UCL Press.
- Darling-Hammond, L. (2021). Defining teaching quality around the world. *European Journal of Teacher Education*, 44(3), 295–308. <https://doi.org/10.1080/02619768.2021.1919080>
- Deng, Z. (2021). Constructing 'powerful' curriculum theory. *Journal of Curriculum Studies*, 53(2), 179–196. <https://doi.org/10.1080/00220272.2021.1887361>
- Deng, Z. (2022). Powerful knowledge, educational potential and knowledge-rich curriculum: Pushing the boundaries. *Journal of Curriculum Studies*, 54(5), 599–617. <https://doi.org/10.1080/00220272.2022.2089538>

- Duit, R., Gropengießer, H., Kattmann, U., Komorek, M., & Parchmann, I. (2012). The model of educational reconstruction – A framework for improving teaching and learning science. In D. Jorde & J. Dillon (Eds.), *Science education research and practice in Europe. Cultural perspectives in science education* (Vol. 5, pp. 13–38). SensePublishers.
- Durkheim, E. (1995). *The elementary forms of religious life*. George Allen & Unwin.
- Emmot, B. (2022). Striding into the unknown. *Prospect*, 310, 59–63.
- Gericke, N., Hudson, B., Olin-Scheller, C., & Stolare, M. (2018). Powerful knowledge, transformations and the need for empirical studies across school subjects. *London Review of Education*, 16(3), 428–444.
- Gundem, B. B., & Hopmann, S. (Eds.). (1998). *Didaktik and/or curriculum: An international dialogue*. Peter Lang.
- Hinchliffe, G. (2007). Beyond key skills: The capability approach to personal development. *Prospero*, 13(3), 5–12.
- Huckle, J. (2017). Powerful geographical knowledge is critical knowledge underpinned by critical realism. *International Research in Geographical and Environmental Education*, 28(1), 70–84. <https://doi.org/10.1080/10382046.2017.1366203>
- Johnston, R. (1985). Introduction: Exploring the future of geography. In R. Johnston (Ed.), *The future of geography*. Methuen.
- Kirby, A. (2020). Reconstructing powerful knowledge in an era of climate change. *Research in Production and Development*, 6(e427), 1–13. <https://doi.org/10.32358/rpd.2020.v6.427>
- Klafki, W. (2000). Didaktik analysis and the core of preparation of instruction. In I. Westbury, S. Hopmann, & K. Riquarts (Eds.), *Teaching as a reflective practice: The German Didaktik tradition* (pp. 139–160). Routledge.
- Lambert, D. (2009). *Geography in education: Lost in the post?* A professional inaugural lecture. Institute of Education, London.
- Lambert, D. (2013). Geography in school and a curriculum of survival. *Theory and Research in Education*, 11(1), 1–14.
- Lambert, D. (2016). Chapter 25: Geography. In D. Wyse, L. Hayward, & J. Pandya (Eds.), *The sage handbook of curriculum, pedagogy and assessment* (pp. 397–407). Sage.
- Lambert, D. (2017). Thinking geographically. In M. Jones (Ed.), *The handbook of secondary geography*. Sheffield: Geographical Association.
- Lambert, D. (2023). Teaching in the Human Epoch: the geography of it all. *GEReCo Blog*. The Geography Education Research Collective. 20th January 2023. <https://www.gereco.org/2023/01/30/teaching-in-the-human-epoch-the-geography-of-it-all/>
- Lambert, D., & Morgan, J. (2010). *Teaching geography 11–18: A conceptual approach*. Open University Press.
- Lambert, D., Solem, M., & Tani, S. (2015). Achieving human potential through geography education: A capabilities approach to curriculum making in schools. *Annals of the Association of American Geographers*, 105(4), 723–735. <https://doi.org/10.1080/00045608.2015.1022128>
- Maude, A. (2016). What might powerful knowledge in geography look like? *Geography*, 101(1), 70–76. <https://doi.org/10.1080/00167487.2016.12093987>
- Mitchell, D. (2020). *Hyper-socialised: How teachers enact the geography curriculum in late capitalism*. Routledge.
- Mitchell, D. (2022). GeoCapabilities 3—Knowledge and values in education for the Anthropocene. *International Research in Geographical and Environmental Education*, 31(4), 265–281.
- Mitchell, D., & Béneker, T. (2022). Expanding students' concept of 'home': Teaching migration with a geographic capabilities approach. In M. Biddulph, S. Catling, L. Hammond, & J. H. McKendrick (Eds.), *Children, education and geography: Rethinking intersections* (pp. 182–196). Routledge.
- Mitchell, D., Hanus, M., Béneker, T., Biddulph, M., Leininger-Frézal, C., Zwartjes, L., & Donert, K. (2022). Enhancing teachers' expertise through curriculum leadership – Lessons from the GeoCapabilities 3 project. *Journal of Geography*, 121(5–6), 162–172. <https://doi.org/10.1080/00221341.2022.2149838>
- Morgan, J. (2012). *Teaching secondary geography As if the planet matters*. Routledge.
- Morgan, J. (2018). Are we thinking geographically? In M. Jones & D. Lambert (Eds.), *Debates in geography education* (Second ed.). Routledge.
- Morgan, J., & Lambert, D. (2023). *Race, racism and the geography curriculum*. Bloomsbury Academic.
- Muller, J. (2022). Powerful knowledge, disciplinary knowledge, curriculum knowledge: Educational knowledge in question. *International Research in Geographical and Environmental Education*, 32, 20–34. <https://doi.org/10.1080/10382046.2022.2058349>
- Nussbaum, M. (2006). Education and democratic citizenship: Capabilities and quality education. *Journal of Human Development*, 7(3), 385–396.
- Nussbaum, M., & Sen, A. (1993). *The quality of life*. Oxford University Press.
- Priestley, M., Biesta, G. J. J., & Robinson, S. (2015). Teacher agency: What is it and why does it matter? In R. Kneyber & J. Evers (Eds.), *Flip the system: Changing education from the bottom up*. Routledge.

- Schwab, J. J. (1969). The practical: A language for curriculum. *School Review*, 78(1), 1–23.
- Sen, A. K. (1985). *Commodities and capabilities*. Oxford University Press.
- Sjöström, J., & Eilks, I. (2021). Correction to: The Bildung theory—From Von Humboldt to Klafki and beyond. In B. Akpan & T. J. Kennedy (Eds.), *Science education in theory and practice*. Springer Texts in Education. Springer. [https://doi.org/10.1007/978-3-030-43620-9\\_33](https://doi.org/10.1007/978-3-030-43620-9_33)
- Sleeter, C. E., & Zavala, M. (2020). *Transformative ethnic studies in schools: Curriculum, pedagogy, and research*. Teachers' College Press.
- Uhlenwinkel, A., Béneker, T., Bladh, G., & Lambert, D. (2016). GeoCapabilities and curriculum leadership: Balancing the priorities of aim-based and knowledge-led curriculum thinking in schools. *International Research in Geographical and Environmental Education*, 26(4), 1–15. <https://doi.org/10.1080/10382046.2016.1262603>
- Vernon, E. (2020). Teaching to the epistemic self: Ascending and descending the ladder of knowledge. *The Curriculum Journal*, 31(1), 27–47. <https://doi.org/10.1080/09585176.2019.1655460>
- Willbergh, I. (2016). Bringing teaching back in: The Norwegian NOU 'The school of the future' in light of the Allgemeine Didaktik theory of Wolfgang Klafki. *Nordic Journal of Pedagogy and Critique*, 2, 111–124. <https://doi.org/10.17585/ntp.v2.268>
- Winch, C. (2013). Curriculum design and epistemic ascent. *Journal of Philosophy of Education*, 47(1), 128–146.
- Young, M. (2008). *Bringing knowledge Back in: From social constructivism to social realism in the sociology of education*. Routledge.
- Young, M. (2013). Overcoming the crisis in curriculum theory: A knowledge-based approach. *Journal of Curriculum Studies*, 45(2), 101–108. <https://doi.org/10.1080/00220272.2013.764505>
- Young, M. (2021). Bridging divides in educational theory. *Journal of Curriculum Studies*, 53(2), 247–253. <https://doi.org/10.1080/00220272.2021.1893386>
- Young, M., & Lambert, D. (with Roberts, C. & Roberts.). (2014). *Knowledge and the future school: Curriculum and social justice*. Bloomsbury.
- Young, M., & Muller, J. (2010). Three educational scenarios for the future: Lessons from the sociology of knowledge. *European Journal of Education*, 45(1), 11–27. <https://doi.org/10.1111/j.1465-3435.2009.01413.x>
- Young, M., & Muller, J. (2016). *Curriculum and the specialisation of knowledge: Studies in the sociology of education*. Routledge.

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