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Knowledge and curriculum: towards an educational and *Didaktik/* curriculum way of thinking and theorizing

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ABSTRACT

The call for 'bringing knowledge back in', epitomized by the concept of powerful knowledge coined notably by Michael Young and Johan Muller, has significantly influenced the 'knowledge turn' in global educational landscapes. However, the way of thinking and theorizing about knowledge and the curriculum that underpins the project of 'bringing knowledge back in' has not received adequate attention in the literature. Using Muller's article 'The palimpsests of knowledge' (this issue) as a starting point and referencing several key works by Young and Muller, this article examines the social realist approach to thinking and theorizing about knowledge and the curriculum, including its promises and limitations. Invoking *Pädagogik* and *Didaktik*, the article proposes an alternative approach that addresses these limitations and provides a foundation for articulating a model of a future-oriented, knowledge-rich curriculum—a model particularly pertinent to the 'knowledge turn' in the National Curriculum in England. The article concludes by calling for greater engagement with continental traditions of educational theory and theorizing.

The call for 'bringing knowledge back in', epitomized by the concept of powerful knowledge coined notably by Michael Young and Johan Muller (Muller & Young, 2019; Young, 2008; Young & Muller, 2013), has significantly influenced the 'knowledge turn' in global educational landscapes. In England, this concept was a guiding principle in the 2011 National Curriculum Review, which proposed that 'the concepts, facts, processes, language, narratives, and conventions of each subject' constitute powerful knowledge that should be integrated into the curriculum (James et al., 2011, p. 9). As a result, the 2014 revised National Curriculum moved away from an emphasis on generic competencies and refocused on curriculum content by delineating knowledge across all subjects, along with necessary progressions and developmental milestones, to ensure that all students have access to essential knowledge.[1] Similarly, the OECD's Learning Compass 2030 reflects a shift from its previous exclusive focus on 21st-century competencies (such as problem-solving, critical thinking, innovation, and creativity) to reaffirming the importance of disciplinary knowledge in education. This knowledge is regarded as 'the foundation of the conceptual structure leading to understanding and expertise' and is essential for 'understanding the world' (OECD, 2019, p. 6).

It is commendable that policymakers and educational specialists in England's Department for Education (DfE) and the OECD have endeavoured to reintroduce knowledge into the curriculum, given that knowledge had long been sidelined in favour of generic competencies—such as

communication problem-solving, critical thinking and creativity—globally. However, these two curriculum initiatives fall short of adequately recognizing the role and significance of knowledge in education. According to Young and Muller (2010), the 2014 revised National Curriculum in England reflects the 'Future 1 scenario', which is conservative and backward-looking. It comprises static academic subjects with fixed and predetermined boundaries and is underpinned by an 'under-socialized' conception of knowledge, treating it as given, absolute, and unchanging (Young & Muller, 2010, p. 14). On the other hand, the OECD's vision of curriculum outlined in the Learning Compass reflects a blend of the 'Future 1' and 'Future 2' scenarios—a combination of disciplinary knowledge and competencies. These two futures, from the perspective of Young and Muller, are fundamentally incompatible. The blend involves the 'co-opting' of disciplinary knowledge for the knowledge economy project, reducing knowledge to something with only utilitarian value (Hughson & Wood, 2022). In both cases, policymakers and educational specialists have failed to adequately grasp the way of thinking and theorizing about knowledge and the curriculum—its potential and its challenges—that underpin the project of 'bringing knowledge back in'.

In this context, the two articles featured in this symposium (special issue) by Johan Muller and Michael Young are particularly relevant, as they both call for engagement with social realism—the broader social realist tradition of which powerful knowledge is a part. They do so by revisiting the ideas of sociologists Émile Durkheim and Basil Bernstein—the two most significant influences on this tradition. Social realism, a research programme within the sociology of education, has been developed by scholars such as Rob Moore, Michael Young, Johan Muller, and Leesa Wheelahan. It is primarily concerned about the place of disciplinary knowledge in the curriculum. This programme has developed its own approach to researching the curriculum, as well as its own way of thinking and theorizing about the nature of the curriculum, including its aims and content (Wheelahan, 2023). However, insufficient engagement with social realism is evident not only among policymakers and educational specialists but also in the academic literature, where researchers investigate the curriculum and classroom teaching through the lens of powerful knowledge (see Muller, 2023).

My contribution to the symposium involves examining the social realist approach to thinking and theorizing about knowledge and the curriculum by analysing Muller's paper and referencing several seminal articles by Young and Muller. This analysis will uncover both the promises and issues or limitations inherent in the social realist tradition. Invoking *Pädagogik* and *Didaktik*, I will propose an alternative approach to thinking and theorizing that addresses these limitations and provides a foundation for constructing a future-oriented, knowledge-rich curriculum that transcends both the English and OECD versions. The construction, in turn, calls for research and development in three key areas. The article will conclude by calling for engagement with other traditions of educational theory and theorizing.

Curriculum theorizing: from knowledge structures in disciplines to knowledge selection and sequencing in curriculum

In 'The palimpsests of knowledge', Muller examines Bernstein's (1992) exploration of Durkheim and Collins's (1938/1977) analysis regarding the emergence of the medieval university and the structure of its curriculum. He then analyses how the sciences and humanities specialize in knowledge through distinct methodologies. Finally, Muller draws implications from this analysis for school curriculum, including aims, as well as the selection and sequencing of content.

Muller's analysis reveals the fusion of Christian faith and Greek reason within the Trivium (grammar, logic, and rhetoric) and Quadrivium (arithmetic, music, geometry, and astronomy). This integration initially balanced inner contemplation (word) with empirical inquiry (world), ensuring a sacred and secure exploration of knowledge. However, over time, secularization marginalized the humanistic sacredness of Trivium, leading to its eclipse by a secular approach detached from personal commitment. This shift diminished the prominence of humanities, as utilitarian knowledge driven by market forces took precedence. In so doing, Muller provided a counterbalance to the view

in the literature that 'Bernstein was somehow biased against the Humanities on the grounds that his knowledge structure analysis favours the hierarchical STEM disciplines (Science, technology and Mathematics)' (p. 17).

The subsequent exploration reveals Bernstein's early classification of disciplines into two types: humanities, characterized by narrative governance and partial subsumption of particulars, and sciences, characterized by maximal subsumption into abstract concepts. More subsumptive disciplines (sciences) require hierarchical knowledge sequencing and explicit evaluative criteria, while less subsumptive disciplines (humanities) allow for diverse knowledge collection and non-hierarchical organization. Sciences prioritize the maximal subsumption of particulars into abstract, often mathematical, concepts, whereas humanities emphasize narrative governance and specialized narrative mastery.

Based on the analysis, Muller draws implications for curriculum goals: in the humanities, the central goal is mastery of 'governing narratives' (specialized frameworks in the Humanities that organize and interpret human-centred particulars through narratives), while in the sciences, it is mastery of abstract concepts. Furthermore, he addresses implications for content selection and sequencing:

> . . . . To begin with the *selection* of content: the more subsumptive a discipline, the greater restriction it will place on selection at least in the formative years: there is certain material that simply must be covered before later material will be comprehensible. This content will have to be carefully sequenced so as not to proceed in a fashion that upsets the progression of the conceptual order... (p. 18)

In short, content selection and sequencing in the curriculum must reflect how knowledge is organized and structured within academic disciplines. The 'structures' inherent in these disciplines 'foster or restrict the conditions for entry, access, and progress in the pedagogic situation' (p. 19). These structures constitute the 'palimpsests' of knowledge, shaping 'the structural possibilities and limits of different knowledge fields' with respect to access to and acquisition of knowledge (p. 20).

The above requirement represents another important feature of the 'knowledge-centric curriculum' model that Muller articulated in his 2022 article, which views knowledge as a 'public', 'non-rivalrous' good that should be made available to all individuals—the central goal of the curriculum. It reflects the 'Future 3 scenario' in that knowledge is situated within academic disciplines; it is 'fallible' and 'open to change', and its development is 'bounded by the epistemic rules of particular specialist communities' (Young, 2014, p. 67).

The social realist way of thinking and theorizing about the curriculum

The discussion of Muller's article sheds light on the social realist perspective on the curriculum, which asserts that the primary goal of schooling is to provide access to knowledge. Accordingly, the curriculum specifies both the knowledge to be included and its organization and sequencing to achieve this goal. This perspective aligns with Bernstein's view that the primary function of schooling is to control access to knowledge and that the curriculum, through its structures and forms of knowledge, regulates, differentiates, and mediates access to knowledge among diverse social groups (Bernstein, 2000, 1971).

Furthermore, the discussion reveals the social realist approach to theorizing the curriculum—an approach that centres on analysing Bernstein's work and developing its implications for the curriculum. This approach can be further elucidated by examining several seminal articles of Young and Muller concerning powerful knowledge and the school curriculum (Muller & Young, 2019; Young, 2008, 2013, 2014; Young & Muller, 2010, 2013). They begin by articulating a theory of powerful knowledge through an exploration of Bernstein's later work on discourses and knowledge structures (Bernstein, 2000). Drawing on Bernstein's notions of horizontal discourse and vertical discourse,[2] Young and Muller differentiate disciplinary knowledge from everyday experience. Disciplinary knowledge is characterized as

'specialized', 'context-independent', and 'systematically principled' (Young, 2008; Young & Muller, 2013). Although socially constructed within specific historical contexts, this knowledge achieves objectivity through rigorous methodologies that generate and validate knowledge claims, structured with concepts 'systematically related to each other in groups' (Young, 2014, p. 75).

Drawing on the Bernsteinian distinction between 'hierarchical knowledge structures' and 'horizontal knowledge structures', Young and Muller further differentiate between two main types of disciplinary knowledge: natural sciences, which evolves cumulatively and progressively with earlier formulations integrated into later ones, and social sciences and humanities, where knowledge expands through the addition of parallel theories rather than subsumption (Muller & Young, 2019; Young & Muller, 2013). Disciplinary knowledge is powerful also because of the powers that knowledge gives to those who possess it. It offers 'more reliable explanations' and new perspectives for engaging in political, moral, and other debates (Young, 2008, p. 14). Mastery of this knowledge enables individuals to transcend personal experiences and envision novel possibilities (Muller & Young, 2019; Young & Muller, 2013).

In short, disciplinary knowledge possesses its own inherent power in terms of its potential impact on individuals who possess it—referred to as powerful knowledge. Young and Muller distinguish this concept from 'knowledge of the powerful', which refers to the perspective and ideology of those in positions of power who produce or determine what knowledge is (Young, 2008; Young & Muller, 2010, 2013). The latter concept was the focus of the new sociology of education (NSOE), of which Young was a key figure during the 1970s.

With their theory of powerful knowledge as the essential point of departure and informed by Bernstein's (1990) theory of pedagogic device, Young and Muller theorize about curriculum, drawing implications for the purpose of education, knowledge selection and organization, and classroom pedagogy. The central purpose of education is to help students gain access to disciplinary knowledge that takes students beyond what they can acquire at home (Young, 2009). Access to this knowledge is an entitlement of *all* students—and (thus) a social justice issue (Young, 2013).

The curriculum involves selecting and organizing disciplinary knowledge according to types and structures in various disciplines or fields. A school subject, seen as the 'best way to organize the knowledge-led curriculum', results from 'recontextualizing' its parent academic discipline—a process of selecting, sequencing, and pacing academic knowledge in accordance with epistemic rules in the discipline and the developmental stages of students (Bernstein, 1990; Young, 2013). In the classroom, the primary role of a teacher is to facilitate students' acquisition of disciplinary knowledge and to deepen their understanding beyond everyday experiences (Young, 2013).

The preceding brief sketch highlights the social realist approach to theorizing about the curriculum based on a theory of knowledge primarily derived from Bernstein and, behind him, Durkheim. The work of social realists is particularly significant in today's global education landscape, where the emphasis on generic competencies and skills often overshadows the role of disciplinary knowledge. The social realist school provides a necessary intervention, reaffirming the importance of imparting disciplinary knowledge—a foundational task essential for promoting democracy and social justice. Access to disciplinary knowledge, as Wheelahan (2023) argues, 'provides the grounds for democracy' because this knowledge is 'the means through which society conducts its conversation about itself, and debates what it should be like in the future' (p. 91). Furthermore, it is 'the key educational contribution to fighting the inequalities' (Lambert, 2014, p. 167). In other words, the social realist school is committed to promoting social justice through epistemic access (see Barrett & Rata, 2014).

However, two significant problems associated with theorizing are noteworthy. First, the central purpose of education is equated solely with providing access to disciplinary knowledge for social justice, while other essential goals—such as individual formation and citizenship development—are conspicuously absent from discussions of the curriculum.[3] Second, the selection and organization of knowledge within the curriculum are viewed primarily as an analytical endeavour, relying on a socio-epistemic analysis of the forms and structures of knowledge in academic disciplines as informed by

Bernstein. This task is separate from the broader purposes of education and classroom pedagogy,[4] with the role of teachers primarily seen as delivering knowledge.

These two problems are inextricably intertwined with the Bernsteinian tradition in the study of curriculum, which investigates and theorizes the function (purpose) of education as well as the selection and organization of knowledge primarily through the application of Bernstein's theory. This way of thinking and theorizing about knowledge and curriculum is primarily *sociological* rather than *educational*, as it does not regard education as a *sui generis* human endeavour possessing an integrity of its own, which requires its own forms of theory and theorizing. It is also not curricular or *Didaktik*, as it regards the selection and organization of knowledge as being simply 'there' to be investigated (Biesta, 2012), adopting a form of theorizing that is 'external' to curriculum making (including planning, development, and enactment). As will be shown, the selection and organization of knowledge into the curriculum require a form of *Didaktik*/curriculum thinking that is vital to curriculum making.

After all, Bernstein's work on discourse and knowledge structures, along with his theory of the pedagogical device, constitutes what Maton and Muller (2007) describe as a 'sociology for the transmission of knowledges', which explains how the production, transmission, and acquisition of knowledge are linked to the (re)production of social inequality and power relations. Given this framework, it is problematic to apply this sociology to theorizing education and curriculum which, beyond the transmission of knowledge, are also expected to foster individual formation and citizenship development in a democratic society. Achieving these dual goals, as argued below, requires moving beyond the conception of education as merely providing access to knowledge and embracing a vision that frames education as the holistic formation of individuals through active engagement with the world.

The above discussion alludes to a deeper, more fundamental issue in educational theory and research in England: the absence of pedagogy—a paradox which was first deplored by Simon (1981) in his classic essay 'Why no pedagogy in England?' and has continued to be lamented by Davies (1994), Hamilton (1999), and Alexander (2004), among others. In contrast, Continental Europe has long established pedagogy as a discipline under the names of *Pädagogik* and *Didaktik*, with distinct forms of theory and theorizing (Biesta, 2011; also; Alexander, 2000, 2001). Due to the lack of such a discipline, curriculum studies in England has predominantly focused on the immediate (knowledge) question of 'what should they [students] know?' rather than the forward-looking (formation) question of 'what should they [students] become?' (Hamilton, 1999, p. 136). Additionally, the selection and organization of content in the curriculum has tended not to be taken as an important issue in its own right—an issue that needs to be tackled from a perspective 'internal' to curriculum making within the institutional context of schooling,[5] as will be clarified in the next section.

Over the years, I have sought to enrich the discourse on knowledge and curriculum initiated by social realists, through the exploration of *Bildung*-centred *Didaktik* and Schwabian curriculum thinking (Deng, 2015, 2020, 2021, 2022). This paper continues this effort, focusing explicitly on the educational and *Didaktik*/curriculum way of thinking and theorizing specifically related to education and knowledge, the selection and organization of content, and classroom practice.[6]

Pädagogik and *Didaktik* – an educational and *Didaktik*/curriculum way of thinking and theorizing

In Germany *Pädagogik*, with *Didaktik* as its central component, has long been established as a discipline directly addressing education and closely linked to 'the practical process of education and to professions in the field' (Terhart, 2017, p. 922). Of particular interest here is *Geisteswissenschaftliche Pädagogik* that, rooted in the rich human sciences (*Geisteswissenschaftliche*) tradition, was developed notably by Wilhelm Dilthey (1833–1911), Hermann Nohl (1879–1960), and Erich Weniger (1894–1961). In this branch *Pädagogik* is depicted as an autonomous discipline in its own right, centrally concerned with *human* existence and flourishing, with 'its own terminology, its

own points of departure, its own methods of investigation and verification' (Krüger & Yonge, 2008, p. 216).

Theorizing does not begin with foundation disciplines (the philosophy, sociology, psychology, and history of education) and their perspectives (Biesta, 2011). Rather, it starts with a specific concept of education and considers practice within the institutional context of schooling, where educational purposes and the institutional curriculum are integral (Kansanen, 2002). *Pädagogik* and *Didaktik* offer a distinctively educational way of thinking and theorizing about knowledge and a distinctively *Didaktik*/curriculum way of thinking and theorizing about curriculum content and classroom teaching.

Bildung and knowledge

Viewed as the central goal of education, *Bildung* refers to the formation of the individual through the cultivation of cognitive, moral, aesthetic, and practical powers and dispositions such as self-awareness, sensibility, autonomy, and dignity (Humboldt, 2000; Lüth, 2000; also; Hopmann, 2007). The concept particularly emphasizes the cultivation of capabilities for self-determination, co-determination, and the dispositions of freedom and responsibility (Klafki, 2000)—essential processes for individuals to become independent and responsible human beings (Klafki, 1998).

Bildung is achieved through engaging with the world in 'the most general, most animated, and most unrestrained interplay' (Humboldt, 2000, p. 58). The individual seeks to 'grasp as much [of the] world as possible' and contribute to humankind by developing their unique potential (Humboldt, 2000). The world, independent of human thinking and practice, is engaged with through various forms of human thought represented by academic disciplines (humanities and sciences) and specialized fields (Lüth, 2000). Essentially, *Bildung* is attained through interactions with multiple forms of knowledge—social, historical, physical, geographical, religious, and aesthetic—each providing access to a facet of the world and offering unique potential for developing human capabilities (Lüth, 2000)

In this context, knowledge is not seen only as something to be transmitted and acquired, but as an indispensable resource for advancing intellectual and moral human powers and for the formation of autonomous individuals. Starting with *Bildung* as the essential point of departure, German educationists theorize the role of knowledge as:

- a means of expressing, exercising, and intuiting powers;
- a potential stimulus for human development;
- a counterpart to delineate the boundaries of the individual; and
- a means of objectifying ideas and powers to leave traces in the world. (Lüth, 2000, p. 77)

Here, knowledge is conceived as embodying a way of knowing and interacting with the world, and therefore, it must be 'used in the service of intellectual and moral *Bildung*' (Lüth, 2000, p. 77). Inquiry into various disciplines and fields of knowledge is not merely about clarifying how knowledge is organized and structured in disciplines and fields but about exploring the 'educational substance' that constitutes the potential of knowledge within these disciplines and fields, as further illustrated below.

Curriculum and content

In *Didaktik* the term 'content'—rather than 'knowledge'—is used to describe what is selected for inclusion in the curriculum. The selection and organization of curriculum content are guided by a way of thinking and theorizing that is distinctively *Didaktik* or curricular. This approach links the task to *Bildung* and to the work of classroom teachers. Each German state has a state curriculum guideline, the *Lehrplan*, designed to offer direction and support for teaching aimed at *Bildung*. The selection and organization of curriculum content are guided by a theory of content that revolves

around four key concepts: educational content (*Bildungsinhalt*), educational substance (*Bildungsgehalt*), the elemental (*das Elementare*), and the fundamental (*das Fundamentale*).

Contents arise from a deliberate process of selecting and organizing a wealth of academic knowledge, experience, and wisdom for *Bildung*. Curriculum designers assume that these contents, designated 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, p. 150)

In this context, educational potential refers to the transformative possibilities that contents can offer for *Bildung*. The educational potential of content is understood as being rooted in its educational substance.

The contents of education and their educational substance are further conceptualized through the concepts of the elemental and the fundamental. The elemental, representing the objective aspect of content, includes essential categories such as concepts, principles, values, and methods that are basic and broad enough to encompass a wide range of phenomena in the world (Willbergh, 2016, p. 115). On the other hand, the fundamental, which represents the subjective aspect of content, signifies the potential impact of these elemental categories on students' perspectives, capabilities, dispositions, and ways of being in the world (Krüger & Yonge, 2008). In essence, contents are educationally 'powerful' not only due to their deliberate selection but also because of their potential to profoundly influence the learning and development of individual learners.

Teaching as a curriculum practice

Teaching is viewed not merely as the transmission of knowledge but as a 'fruitful encounter' between cultural assets, mediated by teachers, with the goal of fostering *Bildung* (Klafki, 2000). In this context, the state curriculum guideline (*Lehrplan*) outlines school subjects and their contents but does not prescribe educational substance, meaning, or significance (Hopmann, 2007). Teachers are afforded significant professional autonomy to interpret and implement the state curriculum guideline.

Teaching is a curriculum practice where teachers interpret and translate the content outlined in the curriculum guidelines into events and tasks that facilitate meaningful encounters between students and content. This process requires *Didaktik*/curriculum thinking aimed at unlocking and actualizing the educational potential inherent in the content. Informed by a theory of content noted above, teachers identify the fundamental elements (substance) of content and elucidate its educational meaning and significance in terms of *Bildung*, taking into consideration specific students and the historical context (both present and future) (Klafki, 2000). Furthermore, teachers seek out exemplary forms such as narratives, dramas, and stories, which embody educational substance. Teaching involves a dual process of unlocking: through exemplary forms, teachers unlock the educational potential of content for students, while students simultaneously open themselves to what is revealed. In essence, teaching 'opens up a world for the student, thus opening the student to the world' (Hopmann, 2007, p. 115; Klafki, 2000).

It should be noted that the educational and *Didaktik*/curriculum way of thinking associated with *Pädagogik* and *Didaktik* have gradually been marginalized and deemed obsolete since the 'empirical turn' in educational theory and research in Germany in the late 1960s (Hopmann, 2008; Terhart, 2017). Today, the concept of competencies has supplanted *Bildung* as the primary educational goal, and a competency-based or outcome-oriented approach to curriculum planning has replaced the *Didaktik* approach mentioned above.

In this context, this paper is an attempt to reassert the significance of the educational and *Didaktik* way of thinking and theorizing by reinterpreting them in the light of the knowledge-turn in the global educational landscapes. It does so in a manner that responds to some of the challenges facing education and curriculum today. In the following section I discuss the requirements for developing a future-oriented, knowledge-rich curriculum—a vision that is informed by, but extends beyond, Young and Muller's theory of powerful knowledge.[7] This aims to transcend both the 2014 revised National Curriculum in England and the vision of curriculum in the OECD's Learning Compass 2023 by linking the teaching of knowledge to the development of capabilities or human powers and the formation of autonomous and responsible individuals. The discussion below revisits and expands upon research presented in my previous publications (Deng, 2022, 2024).

Toward a future-oriented, knowledge-rich curriculum: three areas of research and development

Curriculum is a teleological practice; it is 'intentional' because it 'has its raison d'être in its ends-in-view' (Westbury, 1972). Without a clear understanding of what we aim to achieve with our policies, programmes, courses of study, and school and classroom practices, we cannot make informed decisions about the most appropriate content or the most conducive methods. Broadly construed, curriculum exists in three arenas: the policy arena (educational visions, goals, and rationale), the programmatic arena (school subjects, programmes, curriculum frameworks, and guidelines), and the classroom arena (instructional events and tasks) (Deng, 2024). Research and development in these three areas are necessary for creating a future-oriented, knowledge-rich curriculum.

The central purpose of education and the significance of knowledge

There is a need to articulate educational goals at the national level. A significant purpose of schools, as Young (2009) rightly argues, is the transmission of disciplinary knowledge that students cannot easily acquire at home. By passing on this disciplinary knowledge to successive generations, schools play a crucial role in 'reproducing human societies' and 'providing the conditions which enable them to innovate and change' (p. 10). However, this epistemic purpose must be guided by a commitment to forming autonomous and responsible individuals who can thrive in the present and future world (Deng, 2022). This foundational aim is essential for human flourishing, citizen formation, and economic prosperity (Deng, 2020, 2022).

In England, there is a pressing need to articulate an educational vision that prioritizes the cultivation of human abilities essential for individual development. What does it mean to be an autonomous and responsible individual who actively participates in and interacts with both the present and future world? What knowledge and understanding must such an individual possess? What intellectual, emotional, moral, social, cross-cultural, and technological capabilities must one develop to become a free and independent individual capable of facing the challenges of the world?

Raising these questions challenges policymakers, curriculum developers, and educators to move beyond the conventional, taken-for-granted view of educational purposes focusing on knowledge access, academic achievement, and social mobility—a perspective that has permeated current debates regarding the English National Curriculum (e.g. Morgan, 2015; Whitty, 2018; Wrigley, 2018). This article calls for a careful consideration of what knowledge is of most worth with respect to what students need to know, be able to do, and become. Like social realism, it emphasizes the acquisition of *knowledge for all* as a crucial educational goal. However, moving beyond social realism, this article advocates for the development of *capabilities for all* as another vital educational goal—one that, as Lambert (2014) argues, is inextricably tied to what Bernstein terms the 'pedagogic rights' of young people to individual enhancement, social inclusion, and political participation. The specifics of these two purposes are contingent upon socio-cultural contexts and must be (re)interpreted in the light of new challenges and expectations in school education. Nevertheless, a well-informed

articulation of educational goals is essential for both institutional curriculum development and classroom teaching, where practitioners strive to pursue, plan, and achieve these aims.

It is important to note that the term 'powers' or 'capabilities' used in this article differs significantly from 'competencies' as promoted by the European Union, the OECD, and UNESCO. While competencies refer to a set of abilities, skills, and dispositions that are considered genetic and free-floating, independent of disciplinary knowledge, powers or capabilities are developed through engaging with disciplinary knowledge and related sources. How and in what ways do academic disciplines and specialized fields contribute to the development of human powers or capabilities? This question necessitates an exploration of the contributions academic disciplines and specialized fields can make. Such an exploration must go beyond a mere socio-epistemic analysis of knowledge forms and structures across disciplines as advocated by Muller (this issue). Instead, it should adopt what Schriewer (2017) terms a 'philosophical-cum-hermeneutic' approach in German *Pädagogik* to examine how these forms and structures relate to the formation of autonomous and responsible individuals, as well as the cultivation of essential human capabilities. Schwab's work provides an illustrative case of how philosophical and hermeneutic methods can be used to analyse the 'structures' within academic disciplines (sciences, humanities, and arts), aiming to identify 'heuristically powerful means' for helping students engage with the 'essence' of these disciplines in a way that cultivates their intellectual and moral powers (Fenstermacher, 1980).[8] Further significant research is needed in this area.

In pursuit of this goal, the concept of powerful knowledge should not be confined solely to specialized disciplinary knowledge. Other forms of knowledge—such as technological, practical, experiential, and aesthetic—can also be significant contributors to personal development (Carlgren, 2020; Deng & Luke, 2008; Schwab, 1969). The challenge lies in identifying these various forms of knowledge and exploring how they can effectively contribute to educational goals, without losing sight of the unique contribution of disciplinary knowledge to personal and social flourishing.

The development of national curriculum frameworks and guidelines

The second area of work concerns the formation of school subjects and the development of related national curriculum frameworks and guidelines which are directed towards the central goals of education and can guide and support classroom practice.

> … How would those knowledges [that individual need to know and that have potential for contributing to human powers] be selected and organized into the content of a school subject within the institutional curriculum? How would a school subject—in the form of curriculum frameworks, syllabuses, and guidelines—be formulated in a way that supports—rather than constraints—curriculum making in classrooms so as to unlock and actualize the potential of the subject? How would curriculum frameworks, syllabuses, and guidelines be designed in a way that provides teachers with a relative degree of professional autonomy in interpreting and enacting what is contained in the institutional curriculum? (Deng, 2022, p. 612)

The formation of school subjects involves more than merely recontextualizing academic disciplines as viewed by social realists. The criteria for selecting and organizing knowledge in school subjects do not reside solely within academic disciplines but are derived from a broader vision of education (as noted above) and its realization in the classroom. This approach requires *Didaktik*/curriculum thinking and theorizing, focusing on what content is, what potential it has, and how that potential can be unlocked in classrooms to cultivate human powers (Deng, 2009; Doyle, 2008). It emerges from a deliberative process of curriculum development embedded in a complex web of considerations related to the four curriculum commonplaces: the subject matter, the learner, the teacher, and the milieu (Schwab, 1973). Such a formation of school subjects is integral to developing curriculum frameworks and guidelines which, when properly designed, can empower and assist teachers in interpreting the content within the institutional curriculum, thereby fostering meaningful student engagement with the essence of the content in the classroom (Deng, 2022).[9]

However, the development of national curriculum frameworks and guidelines has not received sufficient attention from educators and curriculum researchers amid the current 'knowledge turn' in the English National Curriculum (Rawling, 2020). Regarding the National Curriculum, teachers in state schools are expected to 'remake' and 'recontextualize' the curriculum, utilizing powerful disciplinary knowledge as a key tool (Lambert et al., 2015; Rawling, 2020). In other words, they are expected to 'bypass' what is prescribed in the National Curriculum (Deng, 2018). Researchers have rarely explored how national curriculum frameworks and guidelines can be developed to support curriculum making in classrooms and be directed to towards educational goals outlined in the National Curriculum. As Rawling (2020) observed, 'The current debate about "powerful knowledge" opens up a new area of concern that national curriculum designers in England and Wales may have been aware of but seemed unsure how to address' (p. 74).

There is a need to rethink the role of national curriculum frameworks and guidelines. These frameworks and guidelines are important resources and tools for teachers to engage in meaningful curriculum work (Ball & Cohen, 1996; Reid, 2006). As noted earlier, in *Didaktik* state curriculum guidelines (*Lehrplan*) are designed to position teachers as autonomous, responsible professionals who interpret and enact the state curriculum to facilitate productive interactions between students and content. Similarly, Luke et al. (2013) argue that curriculum frameworks and guidelines can support and enable teachers' professional interpretation of the institutional curriculum and enhance face-to-face interaction in the classroom.

Classroom teaching as curriculum practice

A third line of research and development aims to understand classroom teaching as curriculum practice and to develop tools and resources that can support such practice. As I have written elsewhere:

> How would teachers interpret and translate the content of a school subject in the institutional curriculum into instructional events, tasks and discourses that render a wealth of possibilities for students to develop human powers? How would they facilitate and support students' encounters with content in a way that students 'open up themselves' to the possibilities rendered? What do teachers need to know and be able to do to unlock the potential in content to bring about such encounters? What would be the curriculum or *Didaktik* models or frameworks that can provide teachers with guidance and support in their curriculum work in classrooms, and how would such models or framework be developed? (Deng, 2022, p. 613)

In this context, curriculum making does not imply that teachers bypass the National Curriculum. Instead, teachers are curriculum makers because they interpret and transform national curriculum guidelines to create meaningful encounters between students and content. This process provides opportunities for students to access knowledge and develop their capabilities through engaging with the content. According to Doyle (1992), teachers 'author' instructional events—that is, the enacted curriculum—by interpreting and adapting the purpose and content of a school subject within the institutional framework, considering students' existing knowledge and experiences. This interpretation and transformation require *Didaktik* thinking as teachers must address questions of what, why, whom and how, with respect to the broader purposes of education (Deng, 2018). Teachers are thus challenged to engage in principled considerations of the nature of the content in the National Curriculum and its educational goals. Additionally, they must develop teaching methods that reflect an understanding of the educational substance of the content. This image of teachers as curriculum makers, in turn, presupposes that national curriculum frameworks and guidelines are developed in a way that supports and facilitates the curriculum work of teachers as reflective professionals, as noted above.

Concluding remarks

Using Muller's article featured in this issue as a starting point and referencing several key works by Young and Muller, this article examines the social realist approach to thinking and theorizing about

knowledge and the curriculum. It demonstrates that their approach is primarily sociological: social realists investigate and theorize the function (purpose) of education, as well as the selection and organization of knowledge, largely through the application of Bernstein's theory. The central purpose of education is seen as providing access to disciplinary knowledge. The selection and organization of knowledge within the curriculum involves a socio-epistemic analysis of the forms and structures of knowledge in academic disciplines that facilitate and constrain the conditions for knowledge acquisition. This way of thinking and theorizing supports a knowledge-centric curriculum model that emphasizes epistemic access to disciplinary knowledge for all and, in this manner, promotes social justice.

Invoking *Pädagogik* and *Didaktik*, this article proposes a different way of thinking and theorizing that is distinctly educational and *Didaktik/*curriculum oriented. It views the central purpose of education as individual formation and the cultivation of human potential, which is inextricably linked to, and can be achieved through, the task of imparting knowledge. The article highlights the selection and organization of content as an important issue in its own right, requiring a unique *Didaktik/*curriculum approach to thinking and theorizing about curriculum and content, which connects the task to the central purpose of education and the practice of teachers in the classroom. Furthermore, it underscores classroom teaching as curriculum making requiring *Didaktik/*curriculum thinking, which 'takes for its starting point the exploration of the educative potentialities of proposed subject-matters' (Reid, 1997, p. 667) and is directed towards the central purpose of education.

I hope this paper demonstrates that *Pädagogik* and *Didaktik* provide a framework for addressing fundamental questions regarding educational purpose, curriculum and content, and classroom teaching in both educational and *Didaktik/*curriculum terms. It provides an invitation—and a challenge—for educators in England and other English-speaking countries to explore continental sources and emphasizes the need for engagement with other traditions of educational theory and theorizing, both historical and contemporary (Biesta, 2012). The traditions also include the American model of curriculum theory and theorizing as represented by Schwab, Westbury, and Doyle (see Deng, 2020). In this way, we can find a means by which fundamental questions of educational purposes, knowledge and curriculum can be discussed within a much broader background of ideas and principles derived from the long history of educational thinking and theorizing, allowing our scholarship to take on a greater public meaning and significance.

Nevertheless, I must point out that serious concerns about the inequality of access to knowledge in society and schooling, as well as the need to promote social justice through equitable access to disciplinary knowledge for all students, are largely neglected in *Pädagogik* and *Didaktik*. In contrast, these issues are central preoccupations in the social realist school and the sociology of education in general. In this context, social realism offers incredibly important lessons for German educationists and *Didaktiker*.

Notes

1. This version of the national curriculum is deeply influenced by the work of American educationist E.D. Hirsch, who posits that pupils need a body of information, knowledge and skill to gain the 'cultural literacy' required to function in society (Hirsch, 1987, 2007).
2. This distinction is derived from Durkheim's distinction between the sacred and the profane (Young, 2008)
3. The assumption may be that individual formation and citizenship development are achieved through the acquisition of disciplinary knowledge, as suggested in the two feature papers by Young and Muller in this issue.
4. Young draws a clear distinction between curriculum and pedagogy, with the former referring to' the knowledge that pupils are entitled to know' and the latter 'what teachers do, and get pupils to do' (Young, 2013, p. 111)
5. From the perspective of Biesta (2012), the selection and organization of content in the curriculum needs to be treated as a process that 'exist in and through the interpretations' of those involved in the practice of curriculum making.
6. In my previous writings (Deng, 2018, 2021) I have shown significant signs of convergence between Bildung-centred *Didaktik* and the Schwabian model of liberal education. I use '*Didaktik/*curriculum' because the *Didaktik*

way of thinking and theorizing in the former, as discussed in this article, is also present in the writings of American curriculum scholars Joseph Schwab and Walter Doyle (Deng, 2020, 2021).

7. I do not refer to this vision as a 'Future 3' curriculum because it is fundamentally different from the 'Future 3 scenario' proposed by Young and Muller (2010) and is informed by educational and *Didaktik* ways of thinking and theorizing rather than the social realist approach.

8. For further explanation, see Deng (2020), Westbury and Wilkof (1978), and Levine (2006).

9. In England, institutional curriculum frameworks and guidelines can be developed by the Department for Education (DfE), which then constitute the National Curriculum to be taught in state-funded and local authority schools. Academies and free schools can develop their own frameworks, with or without reference to the National Curriculum.

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Disclosure statement

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