

[CH]A teacher's role in making a given knowledge curriculum into a powerful knowledge curriculum

[AU]Qian Gong, Clare Brooks and Yushan Duan

*ABSTRACT: Through examining the case of one senior high school geography teacher who has an understanding of powerful knowledge, this article presents the possibility of making a given geographical knowledge-based curriculum into a powerful geographical knowledge-based curriculum in China. The article argues that a curriculum based on powerful geographical knowledge can avoid the dangers anticipated with the ongoing competencies-based geography curriculum reform in China. In addition, the article demonstrates how the case study teacher's pedagogical practice echoes some of the principles of Bernstein's notion of 'visible pedagogies', namely strong classification strong framing (+C+F). The article discusses how 'visible pedagogies' could provide an approach to the absence of pedagogy in a powerful knowledge-based curriculum. The article argues that it is within the power of individual teachers to use 'visible pedagogies' to make a given knowledge-based curriculum into a powerful knowledge-based curriculum.*

[A]Introduction

The Ministry of Education of the People's Republic of China (MoE PRC, 2017) issued the competencies-based senior high school geography curriculum standards in December 2017, which started a new round of geography curriculum reform. As a country with a long history of a knowledge-based curriculum, China needs seriously to consider if the geography curriculum reform can really change teachers' practice. Given that the reform has been developed in order to mitigate some serious problems with the current knowledge-based geography curriculum (Wu, 2013), many hopes are pinned onto the new geography curriculum. However, there is a danger that the new geography curriculum reform could return to a given knowledge-based curriculum or be caught in a learner-directed curriculum, which may lead to the erosion of expertise and the loss of trust in specialist knowledge (Young and Muller, 2010). This latest reform presents the possibility for a new type of curriculum, one that is centred on the idea of 'powerful knowledge'. By examining the practice of one geography teacher, who is already able to achieve this 'powerful geographical knowledge'-based curriculum, this article explores what conditions are necessary for China to achieve this approach within geography education.

Young (2017) takes the idea of treating the curriculum as a social fact from Durkheim (1966). Such an approach considers the curriculum as a constraint on what students can learn, through boundaries between the curriculum and the experience of students out of school. These boundaries can also be seen as a set of possibilities about how students can progress in their learning. This kind of curriculum offers opportunities for all students to move beyond the experiences they bring to school and to acquire knowledge described as 'powerful knowledge' (Beck, 2013; Young, 2013b; Young and Muller, 2013) that is not tied to their everyday experiences. Access to such knowledge is both an epistemological and a social justice issue (Firth, 2011). On the basis of a social realist theory of knowledge, the role of boundaries and the social differentiation of knowledge, three Future scenarios' are identified (see Figure 1).

[start Figure 1 near here][caption]Figure 1: Three future scenarios. Sources: Young and Muller, 2010; Lambert *et al.*, 2015 [end]

|          |  |
|----------|--|
| Future 1 | Boundaries are given and fixed – the 'Future' is associated with a naturalised or 'under-socialised' concept of knowledge; the emphasis is on subject delivery – on knowledge for its own sake and traditional subjects assumed to be given and rather static bodies of knowledge. |
| Future 2 | The end of boundaries – the 'Future' is associated with an 'over-socialised' concept of knowledge; the emphasis is on skills and 'learning to learn' – knowledge is process based and is socially  |

|          |  |
|----------|--|
|          | constructed; curriculum focuses on skills and competences; subject divisions are artificial and arbitrary; experiential learning is highly valued.   |
| Future 3 | Boundary maintenance is prior to boundary crossing – in this 'Future' it is the variable relation between the two that is the condition for the creation and acquisition of new knowledge; students are introduced to 'the epistemic rules of specialist communities' to provide ways to understand the world objectively, and take students beyond their everyday experience. |

[end Figure 1]

However, it seems that a powerful knowledge-based approach to curriculum faces a major pedagogical problem (McPhail and Rata, 2015). Margaret Roberts points out that:

[start quote] *Young's idea on powerful knowledge raise interesting issues about curriculum and pedagogy but do not resolve them. We need to know much more about the pedagogies that would make such knowledge accessible and meaningful for all students'* (2014, p. 205).[end]

A powerful knowledge-based geography curriculum could be a viable option within the Chinese geography curriculum reform, but only if the approach adopted addresses the pedagogical problem by finding suitable ways to teach the curriculum.

This article suggests that by using 'visible pedagogies' (strong classification (+C) and strong framing (+F)) (Bernstein, 1977), teachers have the potential to make a given knowledge-based ('Future 1') curriculum into a powerful knowledge-based ('Future 3') curriculum in China. The first part of this article traces the tradition of a given knowledge-based Chinese geography secondary school curriculum. The second part discusses why the transition from a given knowledge-based to a powerful knowledge-based geography curriculum can be useful to avoid the dangers associated with the ongoing competencies-based geography curriculum reform in China. Through an analysis of one Chinese secondary school geography teacher's practice, the article concludes that 'visible pedagogies' (as described here as +C+F) has the potential to make Future 3 geography curriculum a reality for the Chinese context.

[A]The given knowledge-based geography curriculum in China

China has been dominated by a knowledge-led curriculum. Educational reforms have been mainly of a political nature, oriented towards the making of the new socialist person (Zhao and Deng, 2016) after the founding of the People's Republic of China in 1949. The school structure and educational theories were deeply influenced by the then Soviet Union. During the 1960s and 1970s, the Cultural Revolution (1966–76) disrupted the normal function of schooling. Thus, during the first several years after the Cultural Revolution, recovering the school curriculum system's emphasis on conventional courses was the main task of curriculum reform (Wang, 2012). The *Decision on the Reform of Education System*, which stated that promoting nine-year compulsory education would be one of the most important missions in the following years was issued in 1985 by the Central Committee of the Communist Party (CCCP) of China, setting the main aim of curriculum reform for the next decade. This curriculum, and those that followed, were predominantly knowledge-led – or Future 1 – in style.

More recently, there has been an attempt to turn away from a knowledge-led approach. Since the early 1990s, because of the rapid social, economic and political change, China needed a fundamental education reform to prepare children for an increasingly globalised world (Guo, 2010; Pepper, 1996). In 1999, the CCCP of China and the State Council (1999) jointly published *The Decision Concerning the Deepening of Education Reform and the Full-scale Promotion of Qualities Education*, requiring the adjustment and reform of the curriculum system, structure and content and, according to the

requirements of quality-oriented education, a new curriculum system for basic education should be constructed. Then, in 2001, the Ministry of Education (MoE) in China released *The Guidelines on the Curriculum Reform of Basic Education* (pilot), officially starting the New Curriculum Reform; the most unprecedented basic education reform in Chinese modern education history. The philosophy underpinning the New Curriculum Reform is on the development of each individual student (Zhong *et al.*, 2001), indicating an attempt to change the former given knowledge-led curriculum. In 2011, the MoE issued primary and junior secondary curriculum standards for all subjects. Both the 2001 and 2011 programmatic curricula reveal China's willingness to change longstanding curricular perceptions (a focus on knowledge) and practices to enhance the quality of its human capital. To do this the reforms in 2001 and 2011 are characterised by a broadening of the scope of learning to include quality, 'shifting from teacher-centric to learner-centric pedagogy, and from learning for assessment to assessment for teaching and learning' (Law, 2014, p. 349). Despite this move, the education reform literature repeatedly reminds us that prescribed curriculum implementation plan or strategies are unlikely to change the practice of teachers (Guo, 2016).

As the circumstances described above indicate, the secondary school geography curriculum in China has changed continuously since 1977 (see Figure 2).

[start Figure 2 near here][caption]Figure 2: The Junior (grades 7–9) and Senior (grades 8–12) secondary school geography curriculum in China: 1977–present.[end caption]

| Period       | Junior Secondary School (ages 12–15) |                   |         | Senior Secondary School (ages 15–18)      |  |                    | Hours of study (per week) |
|--------------|--------------------------------------|-------------------|---------|---|--|--------------------|---------------------------|
|              | Grade 7                              | Grade 8           | Grade 9 | Grade 10                                  | Grade 11                               | Grade 12           |                           |
| 1977–80      | Chinese Geography                    | World Geography   | -       | -   | -                                      | -                  | 5                         |
| 1981–89      | Chinese Geography                    | World Geography   | -       | Senior Secondary School Geography         | -                                      | -                  | 7                         |
| 1990–95      | Chinese Geography                    | World Geography   | -       | Compulsory Geography                      | -                                      | Optional Geography | 12                        |
| 1996–2000    | Chinese Geography                    | World Geography   | -       | Compulsory Geography (physical geography) | Compulsory Geography (human geography) | Optional Geography | 11                        |
| 2000–present | World Geography                      | Chinese Geography | -       | Compulsory Geography (physical geography) | Compulsory Geography (human geography) | Optional Geography | 10                        |

[end Figure 2]

Regardless of how the geography curriculum has changed, Li and Li argue (2009) that it has maintained a knowledge-based and content-driven form. Taking a small section of the junior and senior secondary school geography curriculum standards as examples (MoE PRC, 2003; 2011), Figure 3 indicates how geographical knowledge is seen as static and given (Young and Muller, 2016). The geographical knowledge in Figure 3 is knowledge with an 'emphasis is on subject delivery – on knowledge for its own sake and traditional subjects assumed to be given and rather static bodies of knowledge' (Lambert *et al.*, 2015, p. 731).

[start Figure 3 near here][caption]Figure 3: Secondary School Geography Curriculum Standards for (a) Junior students 'Residents' section, and (b) Senior students 'Population and cities' section. Source: MoE PRC (2001; 2011).[end caption]

| <b>(a) Junior Secondary School content: Residents</b>  | <b>Activity suggestions</b>   |
|--|---|
| <b>Population and race</b> <ul style="list-style-type: none"> <li>• Using maps and other data to summarize the characteristics of world population growth and distribution</li> <li>• Using examples to illustrate the environmental, social and economic effects of overpopulation</li> <li>• Pointing out the characteristics of the three major races in the world and point out the main distribution areas of the three major races on the map</li> </ul>   | Carry out debate activities. For example, the debate can be organized on the themes of ‘which is better, a large population or a small population’ and ‘which is better, living in the country or living in the city’.  |
| <b>Language and religion</b> <ul style="list-style-type: none"> <li>• Using the map to point out the main distribution areas of Chinese, English, French, Russian, Spanish and Arabic</li> <li>• Pointing out the three major religions in the world and their main distribution areas</li> </ul>  |   |
| <b>Settlement</b>  |   |
| <ul style="list-style-type: none"> <li>• Using pictures to describe the difference between urban and rural landscapes</li> <li>• Using examples to demonstrate the relationship between settlements and the natural environment</li> <li>• Understanding the significance of protecting the world cultural heritage</li> </ul>   |   |
| <b>(b) Senior School Curriculum content: Population and cities</b>   | <ul style="list-style-type: none"> <li>• Students can use local population data to draw charts, and further explore the local population development model and the characteristics of population migration.</li> <li>• Students can collect maps and photos of the city at in different periods and discuss the changes of the city.</li> <li>• Students can collect data to compare the cultural differences between different regions or cities.</li> </ul> |
| <ul style="list-style-type: none"> <li>• Analyzing the main characteristics and regional distribution of different population growth models</li> <li>• Using examples to illustrate the main reasons for population migration</li> <li>• Telling the difference between environmental carrying capacity and population reasonable capacity</li> <li>• Using examples to analyze the spatial structure of the city and explain the reasons for its formation</li> <li>• Explaining the differences in service functions of cities of different sizes in connection with the theory of the regional structure of cities</li> <li>• Using relevant data to summarize the process and characteristics of urbanization and explain the impact of urbanization on the geographical environment</li> <li>• Using examples to illustrate the impact of regional culture on population or cities</li> </ul> |   |

[end Figure3]

In 2014, the MoE PRC (2014) released *The Instruction on the Comprehensively Deepening of Education Reform and Implement the Fundamental Task of Lide Shuren* (*Lide Shuren* means the establishment of moral values and the cultivation of people), officially announcing the start of senior secondary school curriculum revision. In accordance with this instruction, the new curriculum standards are competencies-based. A competencies-based curriculum is more like the Future 2 curriculum described by Young and Muller (2010) (Figure 1), which they argue can lead to the erosion of expertise and the loss of trust in specialist knowledge. Young and Muller (2010) argue that the imperfection of Future 1 and Future 2 curriculum makes Future 3 curriculum a possible alternative.

In the following section, we outline the reasons why the transition from a given knowledge-based to a powerful knowledge-based geography curriculum, (or from Future 1 to Future 3 geography curriculum), can help avoid the dangers associated with the ongoing competencies-based geography curriculum reform in China.

#### [A]Making the transition from Future 1 to Future 3 geography curriculum

Young states that 'curriculum theory and, therefore, the curriculum must start not from the student as learner but from a student's entitlement or access to knowledge' (2013a, p. 107). Young (2013a) argues that curriculum theory lost (or is fast losing) its primary object – what is taught and learned in school in moving from a technicist model of instruction to an ideology critique. Logically, the next question is: 'what is the knowledge that school students are entitled to have access to?' Young's answer is 'powerful knowledge' (Young, 2013b), which emphasises how the sociality of knowledge underpins its emergent 'objective' character (Young and Muller, 2016).

The Future 3 curriculum is a new way of thinking about the curriculum based on the entitlement to powerful knowledge for all students (Young *et al.*, 2014). In contrast to a Future 1 curriculum whose boundaries are fixed and that treats knowledge as given, the knowledge of Future 3 curriculum comes from the specialist communities of researchers in different fields. A Future 3 curriculum is fallible and always open to challenge through the debates and research of that particular specialist community. Unlike the openness of knowledge assumed by Future 2 curriculum, which is the end of boundaries, a Future 3 curriculum is bounded by the epistemic rules of the particular specialist community. Future 3 curriculum treats subjects as the most reliable tools available for enabling students to acquire knowledge and make sense of the world (Young *et al.*, 2014). The advantage of a Future 3 curriculum indicate the necessity of making the transition from Future 1 to Future 3 curriculum in China, because it will ensure the ongoing competencies-based geography curriculum reform avoids learner-directed education.

Thus far, the articulation of a Future 3 or powerful knowledge-oriented curriculum, has been a theoretical discussion. As John Beck (2013) has pointed out, there is little empirical evidence about the viability of a Future 3 curriculum. A key dimension of the Future 3 curriculum is how it relies on teachers to act as 'curriculum-makers' (Lambert and Hopkin, 2014). Teachers are the curriculum-makers because 'the curriculum as experienced by children and young people in the classroom is, at least in part, the one that has been made by teachers' (Lambert and Morgan, 2010, p. 49). As curriculum-makers, teachers can have a significant impact on the curriculum, since the text of the curriculum require teachers' interpretation and application. Lambert *et al.* argue that 'the quality of the teacher's understanding of the subject's goals and purposes in the context of the discipline; that is, the potential and possibilities of geography contributing to the educated person' (2015, p. 731).

Therefore, in order to understand how the ongoing geography curriculum reform in China may become a Future 3 geography curriculum reform, it is necessary to understand how teachers with an understanding of powerful knowledge can act as curriculum-makers. In the remainder of this article, we describe and analyse the practice of one such teacher.

#### [A]Achieving a Future 3 geography curriculum – 'visible pedagogies' matters

The research method adopted in this study is that of a professional conversation. This approach to collecting, analysing and making meaning of data, is a dialogic process of talking at cross-purposes, reviewing different points of view and seeking to establish a common meaning (Gadamer, 1989). The participant of this study is one Chinese senior secondary school geography teacher, Li (a pseudonym to ensure confidentiality). Li has worked at a top-ranked secondary school as a geography teacher in Jiangsu Province for 20 years. In China, there is a Professional Rank System for teachers, which is divided into four levels (from low to high): 3rd grade, 2nd grade, 1st grade and senior secondary. Li's appointment as a senior secondary geography teacher 15 years ago is evidence of the provinces' recognition of his professional status. To undertake a fruitful professional conversation, it was necessary to select a participant who had extensive experience of teaching geography throughout the various curriculum reforms outlined above, but who also had a reputation for teaching a curriculum akin to Future 3. Li was recommended to us through professional networks as being such a teacher. He also had the status of a 'senior', highly-ranked teacher. Widely regarded as an exceptional teacher, Li was likely to have a particular perspective on the potential of teaching a Future 3 curriculum. While this case is not intended to represent the whole geography teachers working in

China; rather, this study aims to gain an advanced understanding of the possibility of achieving a Future 3 geography curriculum in the Chinese context.

The themes of findings are analysed in order to address two interrelated research questions:

- Is it possible to make the transition from Future 1 geography curriculum to Future 3 geography curriculum in China?
- And, if it is possible, what might pedagogies of the powerful knowledge-based approach to geography curriculum look like?

Having an understanding of powerful knowledge makes the geography curriculum Li teaches a Future 3 geography curriculum. Meanwhile, our first research question gives rise to the question: 'is it possible to give Li a living space within a Future 1 curriculum dominating school?' Analysis of conversations with Li attended to meanings and understandings generated from the speaking, listening, sharing, questioning and reflecting process throughout the study. The selected themes reported in the following section are not the only (or the most central) themes. Rather, it is an attempt to demonstrate how such a geography teacher who holds the idea of powerful knowledge can be understood, and what this understanding has to do with broader powerful knowledge related research.

[B]Using a solid foundation and understanding of geographical knowledge to control the curriculum

Teachers are not free to determine their own practice, because they need to endure the strong pressures from school and broader education cultures (Brooks, 2016). Although the Chinese national geography curriculum standards has already defined what to teach, Li still has his own understanding of how to interpret the geographical knowledge curriculum content:

[start quote] *In China, most geography teachers only teach the content of geography textbooks which were written based on the national geography curriculum standards. Taking senior secondary school geography textbooks used in my school as examples, they were written based on the 2003 national senior secondary school geography curriculum standards. These textbooks were published more than ten years ago and the geographical knowledge in them were fixed for so long a time. The world's population, for example, still uses the 2008 statistic 6.7 billion. As for me, the geographical knowledge taught in class is open to challenge. We, secondary school geography teachers, should also always pay attention to the academic developments of geography and bring new knowledge in our teaching.* [end quote]

Knowledge is 'powerful' if it predicts, explains, enables us to envisage alternatives and helps us develop systematicity in our thinking plus a deepening and broadening of our perspectives (Young *et al.*, 2014). To understand and teach powerful geographical knowledge, Li should want to teach his students to explain, generalise, predict, evaluate, consider alternatives and think about facts rather than just remember them. This conversational excerpt indicates Li treating himself as a curriculum-maker thinks the knowledge in curriculum is fallible and created by specialist communities or disciplines, which (to some extent) can indicate he has the understanding of powerful knowledge (Maude, 2016). Then Li moves to talk about what this understanding of powerful knowledge makes him to do:

[start quote] *The solid foundation and profound understanding of geographical knowledge give me the courage to change the official curriculum issued by MOE or the school. Based on my own interpretation of geography and students who I teach, I decide what cases I should use to illustrate geography phenomenon in class, what the size of one class capacity [sic] and what knowledge points come first during my teaching. I get used to teaching solar energy, earth's modern atmosphere, global temperatures, wind and ocean currents, air pollution, acid deposition and wind power into energy-atmosphere system [sic]. I like to look at it vertically: I will trace this concept's formation and evolution and will analyze how it works, its*

*mechanism, at the same time. Then I will look at it horizontally: I will make my students understand other related concepts and possible practical applications of this concept. My ultimate teaching goal is that all my students can think systematically with geography and use geographical language produced by the systematic geographical thinking to propose, analyze and solve problems.*[end quote]

The geography curriculum as it is implemented by teachers and experienced by students is always open to interpretation (Young *et al.*, 2014). Young *et al.* (2014) point out that different types of specialised knowledge are best selected, paced and sequenced for students at different stages of their education, which is the teachers' professional knowledge of the curriculum. By treating himself as a subject specialist with a strong subject identity, Li's descriptions of his teaching practice indicate that he uses his professional knowledge of geography to recontextualise the curriculum. For Li, being a subject specialist comprises more than just knowing content; it also comprises an understanding of the discipline with an implicit set of discipline-related values that go beyond content and knowledge (Brooks, 2016). Meanwhile, as a subject specialist, Li has the courage to interpret and even change the official curriculum in his way, providing powerful geographical knowledge that 'enables young people to follow and participate in debates on significant local, national and global issues [and thus] takes young people beyond the limits of their own experience' (Maude, 2016). Afterwards, Li talks about what this understanding of powerful knowledge gives him:

*[start quote] I am pleased to see that under the circumstance of examination-centred assessment system in China, although I do not teach for the examinations, my students can achieve both geographical competences and excellent examination results. If we, geography teachers, enable students to master the comprehensive geographical knowledge and systematic geographical thinking, students will enjoy the educational value of geography, and at the same time, they will naturally have good examination results. I always use the Confucian words "A wise man is free from perplexities". That is to say, when our knowledge and understanding of geography gradually accumulates to a certain extent and we become a person with geography wisdom, we will have the right to explain the official geography curriculum and have the authority to control the school geography curriculum. At that time, how to teach should not be the question that makes us confused.*[end quote]

In many areas in China, students' academic performance is linked to their assessment by teachers, their teachers' assessment by their schools, schools' by educational authorities, and educational authorities' by local governments (Law, 2006), which creates a 'vicious cycle of assessment'. The vicious cycles of assessment together with the impact of limited access to higher education and the sociocultural psychology of not falling behind are entrenched across China. They remain strong impediments to the realisation of a paradigm shift in Chinese classroom curriculum (Law, 2014). With the idea of powerful knowledge-based approach to curriculum, Li is able to survive the examination-centred assessment system, because of his high levels of geographical knowledge and pedagogic skills (Lambert and Hopkin, 2014). Until now, Li's narrative appears to be treating geography curriculum as Future 3. More specifically with the solid foundation and profound understanding of powerful geographical knowledge, Li assumes the authority to control the school curriculum.

[B]Reflecting frequently on teaching effectiveness in order to modify pedagogy

'Good' teaching in a Chinese classroom should accordingly be supported by a learning environment, which is marked by orderliness, discipline, conformity and social interdependency (Huang and Leung, 2004). Here, Li explains his view of teaching:

*[start quote] There is a common saying in China, which is "Every student can be taught well, if not, it is the teacher who should be blamed." Therefore, I reflect on my own teaching when my students' learning are poor and I try to modify my pedagogy. Through constant reflection, I feel that teachers should fully devote to their class and give students complete attention from their hearts. Teachers also should use accurate and explicit expressions to make themselves understood. Many students tend to confuse "climate" with "weather" when*

*answering questions. So teachers needs to be sensitive to this sort of confusion throughout their teaching and give timely feedback that can improve, modify, expand and enhance their students. Teachers can give students timely encouragement and inspiring help, and that will enhance students' confidence and enthusiasm in class and make students really immersed in the teachers' teaching.'*[end quote]

In Chinese contexts, teachers tend to persevere with a particular learning approach rather than adopt multiple outcomes for different students in their classes (Law and Li, 2013). Li will try his best to modify his pedagogy to ensure all of his students can achieve the same learning outcome after his teaching. Many studies have testified that imperfections in teacher knowledge and understanding are a source of misconception for students (Dove, 2016). Therefore, Li's narrative about using 'accurate and explicit expressions' is very poignant. Only with the mastery of geographical knowledge can teachers draw upon a range of ways to teach complex concepts. By using a variety of pedagogic techniques, the teacher's grasp of the subject matter can be brought into play to assist students in 'reading' the teaching text (Young *et al.*, 2014).

In China, under the framework of the national curriculum, curriculum content is mainly organised according to the logical structures in the system of knowledge, with little reference to the needs of students of various ages (Zhao and Deng, 2016). Li's idea of being sensitive to students' feedback throughout teaching makes it easier to connect teaching with the experiences of students. It can also help the teacher to tap into students' curiosity, aspirations, interests and potential capacity and to explore the educational potential of curriculum for students' growth and development. The subjects of a Future 3 curriculum are both supported and challenged by new discoveries in their associated disciplinary communities and research undertaken by subject teachers with expertise in how different students learn and on the best activities to take students' learning further (Young *et al.*, 2014). It is teachers, through their pedagogy, who draw on students' everyday knowledge in helping them to engage with the concepts stipulated by the curriculum and to see their relevance (Young, 2010). Research has shown that pedagogic practice can overcome the effect of students' social backgrounds (Morais *et al.*, 2004).

[B]Following academic research to update geographical knowledge

A disciplinary background can induct teachers into a way of thinking geographically that reflects the 'rules' of knowledge construction that are particular to geography (Brooks, 2016). This is the main reason why Li prefers to treat himself as a member of a specialist subject community:

*[start quote]As I mentioned earlier, I think geographical knowledge is open to challenge. More specifically, the openness of geographical knowledge means that all geography teachers can attach their own understanding to the knowledge they teach and transmit this understanding to their students. The word challenge I used here means that academic geography is constantly developing. It is impossible to revise the national geography curriculum standards and rewrite the geography textbook constantly to catch up with the development of geographical knowledge. But as in-service teachers, we can reflect new geographical knowledge in our teaching, which will ensure that the students' geographical knowledge will keep pace with the times. Consequently, I subscribe to journals about geography and geography education. I also participate in academic annual conferences and write academic papers to follow the footsteps of the development of geography and geographical knowledge. In this way, it will keep the "freshness" of the geography curriculum I teach which makes me happy to teach and students happy to learn.'* [end quote]

Powerful knowledge is knowledge created and developed by the disciplinary communities that exist outside the direct experience of students. Powerful knowledge is specialist knowledge and it follows, therefore, that schools need teachers with that specialist knowledge (Young and Muller, 2016). Li tries his best to keep up with the development of geographical knowledge by reading academic journals and participating in academic conferences, activities that are not common among school



geography teachers in China. Consequently, the geographical knowledge Li teaches in class is not fixed, but dynamic, which makes it more likely that he is teaching 'powerful geographical knowledge'.

This is an example of how one geography teacher, even in a Future 1 society like China, can seek to achieve a Future 3 geography curriculum. To some extent, Li's narrative shows that achieving a Future 3 geography curriculum depends on teachers holding the idea of powerful knowledge, and working to enable their students to obtain powerful geographical knowledge through the selection of appropriate pedagogies. Coincidentally, it is interesting that Li's pedagogical practice echoes some of the principles of 'visible pedagogies' – namely strong classification strong framing (+C+F) – described by Bernstein (1977). The principles of classification and framing (Bernstein, 1971) conceptually refine the necessary features of educational transmission, through descriptions of possible pedagogic codes. The key distinctions between such codes lie in the extent to which the principles and rules of their various aspects are made explicit ('visible pedagogies', +C+F) or are implicit ('invisible pedagogies', -C-F) (Moore, 2013). A teacher operating with visible pedagogies (+C+F) will tend to identify with a subject and have authority by being an expert in the subject (Moore, 2013).

Essentially, the concepts of classification and framing systematically model the pedagogies that mediate the relationship between transmitters and acquirers, and which regulate access to knowledge (Moore, 2013). Classification refers to the degree of boundary maintenance between contents (Bernstein, 1977) and it regulates what discourse is to be transmitted and its relation to other discourse in a given set (e.g. a curriculum) (Moore, 2013). Classification can be expressed as:  $\pm C_{ie}$  (with +C representing a strong classification and -C a weak classification). When classification is strong (+C), there will be strong insulation between categories: i.e. each subject will be taught separately in its own special time slot, in its own special room and by its own special teacher (Moore, 2013). Based on the definition above, Future 1 curriculum and Future 3 curriculum meet the criterion of strong classification (+C) because both are insulated by strong boundaries. Therefore, we argue that Future 1 curriculum and Future 3 curriculum are features of a strong classification (+C) curriculum.

Framing refers to the degree of control a teacher and student may possess over the selection, organisation, pacing and timing of the knowledge transmitted and received in the pedagogical relationship (Bernstein, 1977). It regulates how the discourse is to be transmitted and acquired in the pedagogic context (Moore, 2013). Framing can be written as:  $\pm F_{ie}$  (with +F representing strong framing and -F weak framing). When framing is strong (+F), the sequencing and pacing of acquisition will be controlled by teachers who determine the timeframe within which the knowledge can be appropriately acquired and in what order (Moore, 2013). Based on Li's description of himself as controlling the sequencing and pacing of acquisition, i.e. he meets the criterion of strong framing (+F); thus, we argue, that Li's pedagogy is a strong framing pedagogy.

#### [A]Conclusion

Through examining the practice of one senior high school geography teacher who acts as a curriculum-maker and has an understanding of powerful knowledge, this study confirms that it is within the power of individual teachers to make a given knowledge-based curriculum into a powerful knowledge-based curriculum, through the use of 'visible pedagogies'; namely strong classification and strong framing (+C+F). There is a danger that the new geography curriculum reform in China could return to a given knowledge-based curriculum or be caught in a learner-directed curriculum, which may lead to the erosion of expertise and the loss of trust in specialist knowledge. We argue that it is possible to make the transition from Future 1 geography curriculum to Future 3 geography curriculum in China to avoid the dangers associated with the ongoing competencies-based geography curriculum reform. Meanwhile, 'visible pedagogies' could be one solution to the pedagogical problem of powerful knowledge-based approach to curriculum. We take the term 'visible pedagogies' from Basil Bernstein, and seek to use it to demonstrate the possibility of achieving a Future 3 geography curriculum in the Chinese context.

These findings could be generally applicable, or Li may just be a special case. However, we believe this story is worth telling because, as Flick argues, '[The] single case dialectically can be understood as an individualized universal' (2006, p. 132). In other words, a single case can be used to understand, deeply, how one individual operates within a particular context. This chimes with Robert

Stake's (2005) assertion that case studies can help us understand how phenomena can affect individuals. The intention, therefore, is to gain a more complex and richer understanding of Li's practice, through our in-depth exploration of his thinking around the teaching of geography. Such observations may be useful to understand wider processes of curriculum making for other geography teachers. Coincidentally, Bernstein (1977) holds the opinion that strong classification is generally realised through visible pedagogies (strong framing). As Future 3 curriculum is a strong classification curriculum, a further discussion about the application range of 'visible pedagogies' and why strong framing is suitable for strong classification would be meaningful and useful.

#### [A]References

- Beck, J. (2013) 'Powerful knowledge, esoteric knowledge, curriculum knowledge', *Cambridge Journal of Education*, 43, 2, pp. 177–93. <https://doi.org/10.1080/0305764X.2013.767880>
- Bernstein, B. (1971) *Class, Codes and Control. Volume 1: Theoretical studies towards a sociology of language*. London: Routledge and Kegan Paul.
- Bernstein, B. (1977) *Class, Codes and Control Volume 3: Towards a theory of educational transmissions*. London: Routledge and Kegan Paul.
- Brooks, C. (2016) *Teacher Subject Identity in Professional Practice: Teaching with a professional compass*. London: Routledge.
- Central Committee of the Communist Party (CCCP) of China (1985) *The Decision on the Reform of Education System*. Beijing: CCCP of China
- CCCP of China and the State Council (1999) *The Decision Concerning the Deepening of Education Reform and the Full-scale Promotion of Qualities Education*. Beijing: CCCP of China and State Council.
- Dove, J. (2016) 'Reasons for misconceptions in physical geography', *Geography*, 101, 1, pp. 47–53.
- Durkheim, É. (1966) *The Rules of Sociological Method* (translated by Solovay, J.H.M.S.A.). New York, NY: Free Press.
- Firth, R. (2011) 'Debates about knowledge and the curriculum: some implications for geography education' in Butt, G. (ed) *Geography, Education and the Future*. London: Continuum, pp. 141–64.
- Flick, U. (2006) *An Introduction to Qualitative Research*. London: SAGE.
- Gadamer, H.G. (1989) *Truth and Method*. New York, NY: Crossroad Publishing Company.
- Guo, L. (2010) *The Meaning of Curriculum Reform for Chinese Teachers*. Saarbrücken: Lambert Academic Publishing.
- Guo, L. (2016) 'Expanding horizons of curriculum wisdoms: teachers' experiences in new curriculum reform in China' in Spangler, J. and Chou, Z. (eds) *Chinese Education Models in a Global Age*. Singapore: Springer, pp. 51–64.
- Huang, R.J., and Leung, K.S.F. (2004) 'Cracking the paradox of Chinese learners: looking into the mathematics classrooms in Hong Kong and Shanghai' in Fan, L.-H., Wong, N.-Y., Cai, J.-F. and Li, S.-Q. (eds) *How Chinese Learn Mathematics: Perspectives from insiders*. Singapore: World Scientific, pp. 348–81.
- Lambert, D. and Hopkin, J. (2014) 'A possibilist analysis of the geography national curriculum in England', *International Research in Geographical and Environmental Education*, 23, 1, pp. 64–78. <https://doi.org/10.1080/10382046.2013.858446>
- Lambert, D. and Morgan, J. (2010) *Teaching Geography 11–18: A conceptual approach*. Maidenhead: Open University Press.
- Lambert, D., Solem, M. and 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, pp. 723–35. <https://doi.org/10.1080/00045608.2015.1022128>

- Law, H.-f. E., and Li, C. (2013) *Curriculum Innovations in Changing Societies: Chinese perspectives from Hong Kong, Taiwan and mainland China*. Rotterdam: Sense Publishers.
- Law, W.-W. (2006) 'Education reform for national competitiveness in a global age: the experience and struggle of China' in Mazurek, K. and Winzer, M.A. (eds) *Schooling around the World: Debates, challenges, and practices*. Boston, MA: Pearson Allyn and Bacon, pp. 68–103.
- Law, W.-W. (2014) 'Understanding China's curriculum reform for the 21st century', *Journal of Curriculum Studies*, 46, 3, pp. 332–60. <https://doi.org/10.1080/00220272.2014.883431>
- Li, J. and Li, W. (2009) 'Secondary school geography curriculum reform in 30 years: review and enlightenment', *Teaching Reference of Middle School Geography*, 1–2, pp. 4–6.
- Maude, A. (2016) 'What might powerful geographical knowledge look like?', *Geography*, 101, 2, pp. 70–6.
- McPhail, G. and Rata, E. (2015) 'Comparing curriculum types: "powerful knowledge" and "21st century learning"', *New Zealand Journal of Educational Studies*, 51, 1, pp. 53–68. <https://doi.org/10.1007/s40841-015-0025-9>
- Ministry of Education of the People's Republic of China (MoE PRC) (2001) *The Guidelines on the Curriculum Reform of Basic Education (pilot)*. Beijing: People's Education Press.
- MoE PRC (2003) *Curriculum Standards for Senior Secondary: Geography (Pilot Version)*. Beijing: People's Education Press.
- MoE PRC (2011) *Curriculum Standards for Junior Secondary Education: Geography*. Beijing: Beijing Normal University Press.
- MoE PRC (2014) *The Instruction on the Comprehensively Deepening of Education Reform and Implement the Fundamental Task of Lide Shuren*. Available at [http://www.moe.gov.cn/srcsite/A26/jcj\\_kjcjgh/201404/t20140408\\_167226.html](http://www.moe.gov.cn/srcsite/A26/jcj_kjcjgh/201404/t20140408_167226.html)
- MoE PRC (2017) *Notice of the Ministry of Education on Printing and Distributing the Curriculum Plan and Curriculum Standards for Subjects such as Chinese in Ordinary Senior High Schools (2017 edition)*. Available at [http://www.moe.gov.cn/srcsite/A26/s8001/201801/t20180115\\_324647.html](http://www.moe.gov.cn/srcsite/A26/s8001/201801/t20180115_324647.html)
- MoE PRC (2018a) *Number of Full-time Teachers in Junior Secondary Schools by Academic Qualifications and Professional Rank*. Available at [http://www.moe.gov.cn/s78/A03/moe\\_560/jytjsj\\_2018/gd/201908/t20190812\\_394185.html](http://www.moe.gov.cn/s78/A03/moe_560/jytjsj_2018/gd/201908/t20190812_394185.html)
- MoE PRC (2018b) *Number of Full-time Teachers in Senior Secondary Schools by Academic Qualifications and Professional Rank*. Available at [http://www.moe.gov.cn/s78/A03/moe\\_560/jytjsj\\_2018/gd/201908/t20190812\\_394266.html](http://www.moe.gov.cn/s78/A03/moe_560/jytjsj_2018/gd/201908/t20190812_394266.html)
- Moore, R. (2013) *Basil Bernstein: The thinker and the field*. Abingdon: Routledge.
- Morais, A., Neves, I. and Pires, D. (2004) 'The what and the how of teaching and learning: going deeper into sociological analysis and intervention' in Muller, J., Davies, B. and Morais, A. (eds) *Reading Bernstein, Researching Bernstein*. London: RoutledgeFalmer, pp. 120–44.
- Pepper, S. (1996) *Radicalism and Education Reform in 20th-Century China: The search for an ideal development model*. Cambridge: Cambridge University Press.
- Roberts, M. (2014) 'Powerful knowledge and geographical education', *The Curriculum Journal*, 25, 2, pp. 187–209. <https://doi.org/10.1080/09585176.2014.894481>
- Stake, R.E. (2005) 'Qualitative studies' in Denzin, N. and Lincoln, Y. (eds) *The SAGE Handbook of Qualitative Research (3rd edition)*. Thousand Oaks, CA: SAGE, pp. ??–??.
- Wang, J. (2012) 'Curriculum reform in Mainland China, 1978–2008', *Chinese Education and Society*, 45, 1, pp. 59–68. <https://doi.org/10.2753/CED1061-1932450107>
- Wu, G. (2013) 'The curriculum reform running in mazes', *Peking University Education Review*, 11, 4, pp. 20–50.

- Young, M. (2010) 'The future of education in a knowledge society: the radical case for a subject-based curriculum', *Pacific-Asian Education*, 22, 1, pp. 21–32.
- Young, M. (2013a) 'Overcoming the crisis in curriculum theory: a knowledge-based approach', *Journal of Curriculum Studies*, 45, 2, pp. 101–18. <https://doi.org/10.1080/00220272.2013.764505>
- Young, M. (2013b) 'Powerful knowledge: an analytically useful concept or just a "sexy sounding term"? A response to John Beck's "Powerful knowledge, esoteric knowledge, curriculum knowledge"', *Cambridge Journal of Education*, 43, 2, pp. 195–8. <https://doi.org/10.1080/0305764X.2013.776356>
- Young, M. (2017) 'What is a curriculum and what can it do?' in Wyse, D. (ed) *Creating Curricula: Aims, knowledge and control*. Abingdon: Routledge, pp. 6–12.
- Young, M., Lambert, D., Roberts, C. and Roberts, M. (2014) *Knowledge and the Future School: Curriculum and social justice*. London: Bloomsbury.
- Young, M. and Muller, J. (2010) 'Three educational scenarios for the future: lessons from the sociology of knowledge', *European Journal of Education*, 45, 1, pp. 11–27. <https://doi.org/10.1111/j.1465-3435.2009.01413.x>
- Young, M. and Muller, J. (2013) 'On the powers of powerful knowledge', *Review of Education*, 1, 3, pp. 229–50. <https://doi.org/10.1002/rev3.3017>
- Young, M. and Muller, J. (2016) *Curriculum and the Specialization of Knowledge*. Abingdon: Routledge.
- Zhao, G. and Deng, Z. (2016) *Re-envisioning Chinese Education: The meaning of person-making in a new age*. Abingdon: Routledge.
- Zhong, Q., Cui, Y. and Zhang, H. (2001) *For Revival of the Chinese Nation, For Every Child's Growth: Interpreting The Compendium for Curriculum Reform of Basic Education*. Shanghai: East China Normal University Press.

[start author panel]Qian Gong is a postdoctoral fellow in the Faculty of Education at East China Normal University, Shanghai, China (email: [clairegong@126.com](mailto:clairegong@126.com)); Clare Brooks is Reader of Geography Education at UCL Institute of Education, London, UK (email: [c.brooks@ucl.ac.uk](mailto:c.brooks@ucl.ac.uk)); Yushan Duan is Professor of Geography Education in School of Geographic Sciences at East China Normal University, Shanghai, China (email: [ysduan@126.com](mailto:ysduan@126.com)).[end]