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Draft

Possibilities-within-Constraints: Implementing the Funds of Knowledge Concept in the People's Republic of China

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This article is designed as the starting point for future research into the implementation of the funds of knowledge concept in the People's Republic of China. Utilizing an exploratory research design, I sketch how the funds of knowledge concept could be used by teachers to empower ethnic minority and city-born migrant children disadvantaged by government policies that restrict access to educational resources and marginalize local languages. The article identifies a number of logistical and cultural constraints that complicate the implementation of the funds of knowledge concept in the Chinese context, including access to minority and city-born migrant students, *guanxi*, examination pressure, and cultural scripts for teaching that emphasize knowledge transmission. However, it also suggests how teachers can work within these constraints by taking advantage of curriculum reform in China, which has led to more autonomy at the local level and the creation of elective courses. Elective courses could provide the space for the deployment of strategies that draw on students' funds of knowledge. The strategies proposed include neighborhood walks, artifact collection, and pedagogies for teaching that foster collaboration between teachers and students. The article also extends the notion of funds of knowledge by suggesting how the funds of knowledge concept could be of benefit to China's *Han* ethnic majority.

Keywords funds of knowledge, China, ethnic minorities, migrant children

Introduction

The funds of knowledge concept has potential application within the Chinese context, which is home to 56 recognized ethnic groups, including the majority group, the *Han*. However, to date, the concept has yet to receive any attention within Chinese academic discourse. This article is thus designed as a starting point for future research into the construction of a funds of knowledge approach in The People's Republic of China. It utilizes an exploratory research design which can be likened to an initial foray into a new or unexplored field in order to ascertain emergent generalizations (Stebbins, 2001). This design is relevant to the potential application of the funds of knowledge concept in China, as currently there are no empirical studies that experiment with this approach in Chinese schools. Therefore, a preliminary survey is necessary in order to suggest how future research might go about implementing a funds of knowledge approach in the Chinese context. The article focuses on two disadvantaged groups, ethnic minorities and city-born migrant children, whose devalued ways of knowing could be valorized by the funds of knowledge concept. I am aware that each group is diverse and should not be reified in homogenous terms. The same is true of terms like Chinese, Western and the West. However, given the exploratory nature of this project, I use these terms homogeneously, despite being cognizant of their heterogeneity. Although accessibility, examination pressure, and the continuing influence of a Confucian worldview are likely to constrain the potential implementation of the funds of knowledge concept in China, curriculum reform has resulted in more autonomy being devolved to the local level. Reform has created gaps in the system that could be exploited by teachers at the grassroots level. As Adamson and Feng (2009) note: "decentralisation offers scope for the refinement of national policy goals at the local level; equally, it allows for subversion (intentional or unintentional) of those goals" (p. 322). Reform thus presents possibilities-within-constraints.

The notion of funds of knowledge was popularized by the pioneering work of Moll, Amanti, Neff, and Gonzalez (1992) in the US in the early

1990s which focused on working-class Hispanic families in Tucson, Arizona. Moll and his colleagues argued that these families were fundamentally competent since they had valuable knowledge acquired from life experiences as they possessed “ample cultural and cognitive resources” located in the household (Moll et al., 1992, p. 134). Since that time, the funds of knowledge approach has been adapted and applied in diverse international settings which highlights its relevance for disadvantage learners around the world (e.g., see Andrews & Yee, 2006; Martin-Jones & Saxena, 2003; Thomson & Hall, 2008, for the UK; Saubich & Esteban, 2011, for Spain; and Hogg, 2013, for New Zealand). Other projects have also built on the concept of household knowledge developed by Moll and his colleagues (1992) by identifying alternative forms of funds of knowledge, such as popular culture (Moje et al., 2004), dark knowledge (Zipin, 2009), and teachers’ funds of knowledge (Andrews et al., 2005). Rios-Aguilar, Kiyama, Gravitt, and Moll (2011) have also extended the theoretical underpinnings of the funds of knowledge concept by relating it to Bourdieu’s (1986) theory of capital. Uniting all of these approaches, however, is the notion of social justice which in the funds of knowledge discourse takes on an ethical imperative (Zipin, Sellar, & Hattam, 2012) to combat inequality by valorizing the cultural lives of disadvantaged groups within the formal curriculum. Social justice has also been defined as creating “equal opportunit[ies] to all families, social groups and classes without any favour or discrimination to any social group” (Yao, Wu, Su, & Wang, 2010).

I first identify the educational and social policies that disempower migrant and minority students in China and then offer a review of the concept of funds of knowledge and methodologies for identifying and drawing on students’ funds of knowledge. I then synthesize the literature on funds of knowledge with the background information on migrant and minority students to create a funds of knowledge approach that operates around and within logistical and cultural constraints by making use of strategies, such as neighborhood walks and artifact collection, that should be relatively easy for teachers to implement. I also propose Hogg’s (2013) collaborative team approach as a more

sophisticated approach that could also be adopted by teachers.

Background

Ethnic Minorities in China

China is home to 56 officially recognized ethnicities. The most dominant and numerous are the *Han* who comprise 90% of the population. The remaining 55 minority groups represent about 13 million people (Wang, 2011). The official language spoken by the *Han* majority is *Putonghua* (Mandarin), a Beijing dialect that has become the dominant language of assessment and instruction in schools in China (Feng, 2005). In contrast, China's minority groups collectively speak 120 languages, of which only 30 have written scripts, with 20 of the 120 languages having fewer than 1,000 speakers (Wang, 2013). Recognizing and valorizing the cultures and out-of-school knowledge of these groups is a social imperative and provides the justification for implementing the funds of knowledge concept in the Chinese context.

Language policies for minorities living in China have mirrored the country's changing political climate (Postiglione, 2009), oscillating from egalitarian respect for minority languages during the founding of the People's Republic in 1949 throughout the 1950s, to suspicion and coercive policies that repressed these languages during the turbulent years of the Cultural Revolution, and, currently, back to more affirmative policies that recognize the rights of minorities to use and develop their own languages (Lâm, 2000). The current policy is one which ostensibly attempts to strike a balance between bilingualism in the minority language and the official language, Mandarin Chinese (Adamson & Feng, 2009). However, despite the return to minority language acceptance, Dello-Iacovo (2009), Lâm (2000), and Wang (2013) argue that China's current language policies for minorities remain assimilationist. These policies promote language transition in which minority languages are valorized only in so far as they have utility in facilitating the transition from local languages to Mandarin, the language of assessment. During this process, minorities gradually

lose their identities and become *deknnowledged* (Lâm, 2000). However, there exist a number of preferential policies, such as more relaxed policy admissions for minority students, which, according to Sautman (1998), have created greater social equity.

The notion of identity also raises the issue of nationality and citizenship education. The official conception of citizenship in China has been described as a *collectivistic socialist citizenship* (Feng, 2006). While minorities have the right to develop their own languages, all citizens of China are nevertheless classified as “Chinese.” The 56 designated ethnic categories are constituents of, and therefore dependent on and subordinate to, an over-arching homogenous Chinese nationality (*zhonghua minzu*) which places obligation, responsibility, and loyalty to the state as prerequisites for social, political, and cultural rights (Feng, 2006; Tapp, 2002). The need to bind China’s disparate ethnic groups together stems from the perennial concern of the party to ensure social stability and cohesion (Law, 2006). The language policies discussed above have thus been interpreted as covert in that they appear to promote equity and inclusion, but are said to assimilate minorities into a *Han*-dominated culture.

Furthermore, the state’s need to ensure national unity and stability has profound implications for the way China’s minorities are represented in multicultural discourses. It is generally agreed that there is a pressing need to respect, protect, and promote ethnic minorities’ languages and cultures within a monolingual *habitus* (Wardman, 2012). However, within the Chinese academic discourse, equating multiculturalism with minority education has given way to the notion of *inclusive multiculturalism*: That is, the Han nationality majority should also be beneficiaries of multicultural education (Feng, 2006). This raises implications for the application of the funds of knowledge concept in the Chinese context which I explore later in this article when I consider how funds of knowledge could be used by teachers whose students are from more affluent contexts.

City-Born Migrant Children

Another disadvantaged group who could benefit from the funds of knowledge concept are the children of migrant workers. It is estimated that there are about 225 million migrant workers in China (Tan, 2010) with over 20 million of them aged between six and 14 accompanying their migrant parents to coastal cities like Shanghai (Chen & Feng, 2013; Tan, 2010). Unlike China's diverse minority groups, migrants are predominantly *Han*-Chinese, sharing the same racial origin as urban residents (Lan, 2014). Whereas minorities living in China are disadvantaged by educational policies that marginalize their local identities and languages, migrants are disadvantaged by the *hukou* system, a household residence that determines where a person lives and what benefits they are entitled to (Liang & Chen, 2007). These benefits include pension, health care, and public education (Chen & Feng, 2013). The *hukou* system was originally created to control migration from rural to urban China (Liang, 2001). And even though it has gradually been relaxed to allow more mobility from countryside to city, it is still identified as the main driver of educational stratification (Hannum, 1999). The *hukou* system has also been identified as a mechanism for perpetuating inequality between urban and rural spheres by creating "two types of citizenship in a single country" (Hao, Hu, & Lo, 2014). Since 2009, however, reform in Shanghai has permitted city-born migrant children to attend the same public and private schools as urban-*hukou* Chinese children (Chen & Feng, 2013). While migrant children and city-born migrant children were systematically excluded from attending urban schools due to the existence of prohibitively expensive entrance fees (Liang & Chen, 2007), both public and private schools are now obliged to accept migrant children without charging sponsor fees (Lan, 2014). However, Lan's (2014) critical examination of the reform in Shanghai reveals that while city-born migrant students are technically part of the school, they remain segregated by visible and invisible barriers. Spatially, the children are segregated from local children as they are taught in different parts of the school, often with second-class facilities, equipment, and resources. City-born migrant students are also made to use different corridors and playgrounds, rarely ever mixing with local students. Lan (2014) also identifies other

subtle forms of segregation, such as entrenched deficit thinking, that can lead to the negative stereotyping of migrants as academically inferior. Spatial and social segregation is conceptualized as *segmented incorporation* and involves the two-fold institutional exclusion and systematic marginalization of migrant children based on “cultural prejudices and discrimination built on the back of the urban-rural divide” (p. 246). As a result of this exclusion from the inside, city-born migrant children can be said to exist in a liminal world, belonging neither to the city nor to the countryside. The funds of knowledge concept could be a way to build connections between rural and urban contexts.

Having established the background to this article, I next present a review of the literature on funds of knowledge. From the outset, it is important to make a distinction between the funds of knowledge concept and a funds of knowledge approach. Whereas the former refers to the life skills, experiences, and knowledge that disadvantaged learners possess, the latter refers to how a teacher or researcher goes about drawing on and valorizing that knowledge in the classroom, and involves consideration of methodology and methods. While the studies consulted for this article all tend to be in agreement concerning the social justice end to which the concept of funds of knowledge is put, the approaches and methods adopted by practitioners and researchers are more diverse due to idiosyncrasies within the local context and the contested nature of funds of knowledge as areas or sources of out-of-school knowledge (Hogg, 2011).

Literature Review

The Funds of Knowledge Concept

Funds of knowledge have been taken to refer to the “historically accumulated and culturally developed bod[ies] of knowledge and skills essential for household or individual functioning and wellbeing” (Moll et al., 1992, p. 133). These skills cover such diverse information as

farming, household management, business and trade (pp. 132–133). Funds of knowledge also include cultural practices that households need in order to survive or thrive and which provide teachers with an invaluable resource of knowledge, rarely acknowledged by the formal curriculum, that can be drawn on to make connections between the classroom and the household (Moll, 1992, p. 21). There are also other areas and sources of knowledge from which funds of knowledge can be drawn. For example, González, Moll, and Amanti, (2005) note that students draw from an increasingly hybrid knowledge base, such as youth culture. Moreover, Moje et al. (2004) locate funds of knowledge in *lived space*. Lived space is defined as an alternative space of “knowledges and Discourses” (Moje et al., 2004) and as the space of the imagination and subjugated knowledges which operate “outside/underneath/ within the prevailing norms of perceived and conceived space” (Thomson, Hall, & Jones, 2010, p. 641).

The Funds of Knowledge Methodology

While the social justice imperative is a fundamental part of the funds of knowledge concept, there is considerable variation in how the concept is put into practice. The now “classic” approach adopted by Moll et al. (1992) draws upon anthropology and education, and involves collaboration between university researchers and practitioner researchers (González et al., 2005). This democratic leveling of roles is a defining characteristic of the funds of knowledge approach developed by Moll and his colleagues (1992), and continues to be used (see Hattam, Brennan, Zipin, & Comber, 2009; Hughes & Greenhough, 2006). Teachers play a key role in the process of data collection by going out into students’ communities and households and undertaking ethnographic research. The household is often used as the interview context for data collection as it allows practitioners and teachers the opportunity to view firsthand the home contexts of their students. These interviews, together with participant observation, are then used to construct units of work that resonate with, and draw on, students’ household knowledge. Ethnographic data also allows teachers to

develop “thick” and “multi-stranded” relationships with their students (Moll et al., 1992, p. 134) thereby destabilizing deficit views of disadvantaged learners as “under prepared” or “below the grade” (Sugarman, 2010).

Alternative Strategies for Identifying Students’ Funds of Knowledge

While the household methodology described above continues to be influential (Rios-Aguilar & Kiyama, 2012), it is likely to be too problematic to implement in the Chinese context due to issues of accessibility (this will be explored in more detail later in this article). Therefore, utilising Hogg’s (2013) list of methodologies for identifying students’ funds of knowledge (pp. 27–28), I next present alternative approaches to identifying funds of knowledge that correspond to my research aim and could also be implemented in the Chinese context. I pay particular attention to methodologies that facilitate the generation of new knowledge and new learning spaces as they can be mobilized to foster critical pedagogies that empower repressed groups, such as minoritized students (Giroux, 2003).

Collaboration

Many projects highlight how student-teacher collaboration can be used to design new curricula that are informed by students’ funds of knowledge (Schwartz, 2015; Sellar & Cormack, 2009; Wei, 2014; Zipin, 2009). Collaboration can also lead to transformation in the way teachers think about their students. For example, Sellar and Cormack (2009) suggest the use of *recursive pedagogies*, a collaborative approach in which students work with teachers to design curriculum units and to rewrite both school and out-of-school knowledge. Wei’s (2014) study of a Chinese complimentary school in the UK found that by co-learning with their students, Chinese teachers increasingly came to recognize the intercultural differences between different ethnic Chinese communities. This study is of particular relevance to my own

project as it is the only study I have been able to find that explores funds of knowledge and Chinese learners. Even though Wei's study focuses on the Chinese diaspora, the conclusions offered are still relevant to my own project as they involve the negotiation of diverse ethnic identities. Therefore, I underscore the use of co-learning as a strategy that is effective in transforming teachers' deficit thinking and could be effective in the Chinese context. In other funds of knowledge projects, collaboration takes the form of study group sessions between teachers and researchers (González et al., 2005; Jovés, Siqués, & Esteban-Guitart, 2015; Moll et al., 1992). These group sessions function as a community of practice and typically involve the discussion of the funds of knowledge concept, ethnographic research methodologies, and data collected in the field (Joves et al., 2015). These sessions are effective in breaking down the hierarchy between researcher and teacher, creating a dialectic that leads to the questioning of established roles and understandings (González et al., 2005). However, a major limitation of the teacher-researcher study group is the exclusion of students from the dialogue. For socially just learning to be truly effective, students' voices need be included in all phases of a project, from planning, to execution, to reflection. Hogg's (2013) investigation of Maori and Pacifica students in a New Zealand high school developed such a collaborative approach that involved students, parents, teachers, and the researcher working together. The participants were organized into teams of five and developed strategies for identifying funds of knowledge that included making a film, giving a presentation, and show and tell sessions. The use of multiple collaborative teams ensured the generation of new knowledge and led to positive outcomes, such as reciprocity, identification of diverse funds of knowledge, and the development of closer teacher-student relationships. The significance of this study to the Chinese context will be discussed in more detail below.

Informal Learning Settings

Researchers have also highlighted the role that informal settings can

play as a strategy for identifying and constructing funds of knowledge (Razfar, 2012; Schwartz, 2015). Razfar (2012) notes that formal classroom settings intersect with informal settings, such as clubs, to create new hybrid critical learning spaces that “transform challenges and contestation into new shared understandings and knowledge construction” (Razfar, 2012, p. 57). Razfar also found that school clubs were an effective way to promote biliteracy which strengthened students’ problem-solving skills in mathematics. Schwartz (2015) also used an after-school club to learn about students’ funds of knowledge and to develop digitally mediated spaces in which to engage students’ funds of knowledge. The informal space is used to facilitate movement from informal spaces to more formal spaces of mathematics or digital literacies. However, using funds of knowledge as a bridge may reinscribe “normative success” in the formal curriculum (Thomson & Hall, 2008). In contrast, alternative informal settings may prove more conducive to socially just teaching. Sugarman (2010), for example, utilized a neighbourhood walk to uncover her student’s funds of knowledge. For Sugarman, careful and deliberate research of just one of her students led to a transformation in the way she perceived all of her students, thereby allowing her to move beyond (2010) or to “unlearn” (Spivak, 2013) the deficit thinking that had unconsciously affected the way she thought about her students before the study.

Symbolic Artifacts

Researchers have also made use of non-print based strategies for identifying and drawing on students’ funds of knowledge. These include the use of symbolic artifacts, everyday objects that students have invested their identity in or are meaningful in some way. In the Home School Knowledge Exchange Project based in the UK, students were given a box which they were encouraged to decorate and fill with personal items such as photos, toys, postcards, and books. The contents of the students’ shoeboxes were subsequently used across the curriculum, drawing on students’ funds of knowledge in mathematics, history, and literacy. Similarly, in Australia, Regenerating Pedagogies

in the North made use of artifacts, although they were used as a springboard for the identification and analysis of local lifeworld issues (Zipin, 2009). In both cases, the use of artifacts allowed students to bring aspects of their out-of-school lives into school which are often marginalized by the formal curriculum (Hughes & Greenhough, 2006).

Visual Methods

Researchers also identify visual methods as an effective way to uncover students' funds of knowledge (Joves et al., 2015; Saubich & Esteban-Guitart, 2011; Subero, Vujasinović, & Esteban-Guitart, 2016). Two strategies that have proven to be effective in uncovering students' funds of knowledge are self-portraits and a "significant circle" which is defined as a graphical representation based on relation mapping which involves participants writing down the people and activities or things that are most meaningful to them in a big circle (Joves et al., 2015). Symbolic artifacts and visual methods are useful in a multilingual context like China as they allow minority students to express themselves without being constrained by either their mother tongue or Mandarin. Moreover, the use of visual methods for identifying funds of knowledge is a creative way of conducting interviews that is responsive to the participants' own meanings and associations (Subero et al., 2016). Visual methods are also effective in uncovering new funds of knowledge as these methods break away from the "tyranny of the 5 paragraph essay" (Schwartz, 2015)—that is, traditional, linear forms of literacy—and allow students to draw on their funds of knowledge in a manner more congruent with their lived experience outside of the classroom. However, visual approaches require teachers to be skillful in interpreting students' visual funds of knowledge and would require training or professional development. As this article will show, access to educational resources is problematic in the Chinese context.

Digital Literacies

Digital technologies, such as smart phones and laptop computers, have

revolutionized education, particularly literacy practice. Increasingly young people interface with each other and reality via new literacies embedded within new technologies such as vlogs, smart phones, simulations, interfaces, and hypertext (Miller, 2015). The use of new technology has started to be explored by researchers working with the concept of funds of knowledge. Marshall and Toohey (2010) and Schwartz (2015) show how new technology can be used to create new funds of knowledge. For example, Marshall and Toohey's (2010) study of Punjabi Sikh students in a Canadian elementary school highlights the way multimodalities—the combining of text, sound and image—can be used to create new knowledge. The students used Mp3 players to record their grandparents' life stories in India which they then translated into picture books. This activity involved students using their knowledge of “old” literacies (storytelling, drawing, handwriting) and combining them with “new” or digital literacies (Mp3 players, the internet, multimodality). Poole (in press) also shows how new technology, such as hypertext, can be used to foster critical pedagogies. The use of visual methods and new technology as a strategy for identifying funds of knowledge has a distinct advantage over household ethnography (Moll et al., 1992) as it allows researchers to uncover students' *individualized* funds of knowledge (or funds of identity) which may or may not be in continuity with the funds of knowledge of adults (Esteban-Guitart & Moll, 2014). The use of new technology can thus give teachers access to funds of knowledge that are drawn from the actual lived experiences of students who, increasingly, interface with each other via new forms of technology such as Facebook (or WeChat in China) that require the sophisticated manipulation of digital literacies.

Identity Texts

Another approach used to uncover funds of knowledge involves the creation of identity texts which are defined as any artifact produced by students who have invested their identity in them (Subero et al., 2016). Identity texts also allow for the mobilizing of students' digital funds of knowledge which creates connections with students' lived

out-of-school experiences. Identity texts are also well-suited to fostering biliteracy (Cummins, 2007) as they facilitate progression through what Moll (2014) calls the *bilingual zone of proximal development*, a Vygotskian take on biliteracy in which the students' mother-tongue functions as a scaffold for advancing performance in English (Subero et al., 2016). Utilizing identity texts for drawing on students' funds of knowledge is a strategy that could be effective in the Chinese context as it has been shown to work in multilingual contexts such as Argentina (Rosemberg, Stein, & Alam, 2013) and Spain (Tarrés Serra et al., 2012). However, in the Chinese context it is necessary to conceptualize multilingualism in terms of trilingualism, that is, mother tongue, Mandarin, and English (Adamson & Feng, 2009). Identity texts could provide teachers with an effective strategy for drawing on, and valorizing, minority languages and identities, which could then be used to scaffold the development of socially just literacy. For example, Sunuodula and Feng (2011) found that despite having few opportunities to learn their mother tongue, Uyghur university students were nevertheless still highly motivated to learn English as they perceived it as a form of linguistic capital with which they could compete with *Han* students. In contrast, the Uyghur students interviewed showed little or no motivation to learn Mandarin, despite its potential linguistic capital, as they felt they were always at a disadvantage compared to *Han* students' whose mother tongue was Mandarin. Given that multilingualism is now considered to be a major source of funds of knowledge (Wei, 2014), Sunuodula and Feng's (2011) results suggest that in some contexts in China English may be a more effective source of funds of knowledge than Mandarin. However, it has been noted that identity texts can lead to knowledge reproduction rather than knowledge production (Subero et al., 2016). This could be compounded in the Chinese context where, despite a turn to more student-centred approaches to teaching, knowledge transmission is still prevalent (Tan, 2013). Furthermore, knowledge reproduction is further reinforced by the wash back effect of China's examination-driven culture which in turn problematises the generation of critical pedagogies as teachers are trained to be skilled technicians rather than progressive educators of

social justice (Giroux, 2003).

Overall, the literature review underscores the complexity of students' funds of knowledge as they can be drawn from a diverse range of areas and sources. Therefore, researchers and teachers need to develop a range of diverse strategies to identify them. The review also shows that the strategies used for identifying and drawing on students' funds of knowledge play a significant role in (re)shaping existing funds of knowledge and in so doing the strategies also bring new forms of hybrid knowledge into existence (Schwartz, 2015). The creation of new knowledge is necessary for the creation of individual rights and social justice (Giroux, 2003). Furthermore, the creation of new knowledge is more likely to be produced within the reciprocal and dialogic spaces of co-learning (Wei, 2014), study groups (Jovés et al., 2015), and team based collaboration (Hogg, 2013) as dialogue can lead to the uncovering of deficit thinking and a transformation in the way teachers think about minority students (González et al., 2005). Collaboration could be augmented by new technology and digital literacies, such as multimodalities (Schwartz, 2015) which would have the added benefit of bringing students' lived experience into the classroom. For these reasons, I consider team based collaboration, neighbourhood walks and symbolic artifacts as effective strategies for identifying funds of knowledge in the Chinese context that can be used for social justice purposes.

A Funds of Knowledge Approach for China

This section begins by exploring some of the logistical and cultural constraints that teachers are likely to face when implementing the funds of knowledge concept in the Chinese context. It then proposes strategies that simultaneously work around and within these constraints to draw on students' funds of knowledge to bring about possibilities for empowerment.

Constraints

One of the biggest difficulties facing both Chinese teachers and outsider researchers is gaining access to disadvantaged students. Many of China's minority students live in remote parts of the country that are difficult to access (Wang, 2013). Compounding matters, recent geopolitical tensions in the regions of Xinjiang and Tibet have led to government intervention which has resulted in access being heavily restricted. These factors make gaining access to China's most disadvantaged minority groups incredibly complicated, and, for outsider researchers such as myself, effectively impossible. In contrast, gaining access to city-born migrant children could be easier due to their geographic proximity to urban contexts. However, researchers still need to negotiate organizational access which is complicated by the existence of segmented incorporation (Lan, 2014). Given the difficulties mentioned above, undertaking household ethnographic research in the manner suggested by Moll et al. (1992) is likely to be too problematic for most teachers. Gaining organizational access in China requires a certain amount of *guanxi* (connections or good relations). *Guanxi* can be understood as a social network of obligations that allows some individuals to gain privileges over others (Leung & Wong, 2001). *Guanxi* can also be described as complementary to, but conceptually distinct from, Bourdieu's notion of *social capital* (Gold, Guthrie, & Wank, 2002) which has been described as "making possible the achievement of certain ends that in its absence would not be possible" (Coleman, 1988, p. 98). To put it more prosaically, *guanxi* can also allow for the cutting of corners. It is a bitter irony that *guanxi* allows researchers access to minority and migrant children, but at the same time widens the gap between rich and poor (Gold et al., 2002). While *guanxi* is a prerequisite for gaining organizational access to disadvantaged students, its deployment raises ethical issues that strain against the social justice imperative at the heart of the funds of knowledge concept.

Cultural and Political Constraints

There also exist a number of entrenched cultural scripts for teaching and learning that could constrain the implementation of the funds of

knowledge concept. Cultural scripts are “a small and tacit set of core beliefs about the nature of a particular subject, how students learn, and the role that a teacher should play in the classroom” (Stigler & Hiebert, 1998, p. 2). Cultural scripts could be likened to *cultural frames* or a schema which consists of language and a set of “tacit” social understandings. Cultural scripts can also be likened to Hofstede’s (2001) notion of *mental programming*, akin to “software of the mind” that leads to people from a particular group, or society, exhibiting the same behavior, from which can be inferred the existence of cultural scripts. Some of the cultural scripts that pertain to teaching in China include respect for the teacher, student attention, and discipline in class, and the importance of practice (Tan, 2015). Although these scripts are informed by a Confucian worldview which conceives of knowledge as fixed, they are not cast in stone, but continue to evolve through a process of *indigenization*¹ (Tan, 2016b). Due to the prevalence of these scripts, teachers in China tend to favour teaching strategies that are commensurate with knowledge transmission, such as lectures, memorization, and repetition (Boyle, 2000). In contrast, the activities and approaches highlighted in the review for drawing on students’ funds of knowledge are underpinned by constructivist pedagogies that assume no fixed bodies of truth and lead to the belief that knowledge is most effectively gained when the learner is active in the construction, or co-construction, of it (Tan, 2016a). Team based collaboration (Hogg, 2013) destabilizes the notion of knowledge as *instrumental* (that is, monolithic and unchanging) by creating a space for the egalitarian polyphony of student teacher, and parent voices. Teachers in China may struggle to understand the funds of knowledge concept in terms of a Confucian frame of reference as the two are epistemologically at odds. It has to be stressed that this clash is by no means unique to China. Thomson and Hall (2008) and Zipin (2009) also provide examples from the UK and Australia respectively of vernacular literacies that clash

¹ For a more thorough definition of indigenization and its role in education borrowing in China see A. Poole (2016). “Complex teaching realities” and “deep rooted cultural traditions”: Barriers to the implementation and internalization of formative assessment in China. *Cogent Education*, 3(1), 1156242. doi: 10.1080/2331186X.2016.1156242

with teachers' beliefs about valid knowledge. However, it is expected that there would be more epistemological dissonance between constructivism and knowledge transmission in the Chinese context due to sociocultural phenomena that create continuity with a Confucian worldview. Some of these phenomena include an embedded examination driven culture (Li & Li, 2010) and strict centralized control from government authorities which regulates pedagogy, school administration, and ideas about education (Wu & Singh, 2004).

There may also be ideological dissonance between the social justice aims of the funds of knowledge concept and assimilationist policies for minority students and the *hukou* policies for economically disadvantaged migrant workers. Social justice, as a form of critical pedagogy, aims to intervene productively in dominant discourses in order to undermine them from the inside (Giroux, 2003). The democratic and emancipatory aims of the social justice project are likely to clash with *glocalized*² versions of democracy that, in the Chinese context, are reconfigured as “democracy with Chinese characteristics,” that is, a form of democracy that is complementary to, and therefore unlikely to subvert, *collectivistic socialist citizenship* (Feng, 2006). Stakeholders, such as policy makers, local district heads, and head teachers, are thus likely to view the funds of knowledge concept as subversive. This creates considerable political barriers that effectively preclude the implementation of the funds of knowledge concept as a national educational policy. Although there are political barriers to the implementation of the funds of knowledge concept on a policy level, education reform has nevertheless opened up gaps in the curriculum that create possibilities-within-constraints.

Possibilities-within-Constraints

Reform

² Glocalized is here understood as the “tailoring and advertising of goods and services [policies, concepts] on a global or near-global basis to increasingly differentiated local and particular markets” (R. Robertson (2012). Globalisation or glocalisation? *The Journal of International Communication*, 18(2), 191–208. doi: 10.1080/13216597.1994.9751780 p. 194).

For the last 10 years, China has undergone persistent and rapid curriculum reform (*xin kegai*, New Curriculum Reform). The reform aims to move China away from its current examination-orientated culture by focusing more on the holistic development of the whole student (*suzhi jiaoyu*, quality-orientated education; Tan & Chua, 2015). As part of this reform, many student-centred policies and practices have been borrowed from the West including formative assessment (Chen, May, Klenowski, & Kettle, 2014) and the flipped classroom (Liu & Feng, 2015) and have gained a great deal of traction in Shanghai (Tan, 2013). The funds of knowledge concept could be integrated with student-centred approaches which would allow students' out-of-school knowledge to be drawn on in the mainstream classroom, a space typically reserved for the teaching of examination knowledge. Conceptually, it should not be too problematic to integrate the funds of knowledge concept with student-centred approaches as they are all informed by constructivist ideas about learning. However, even in cities like Shanghai and Beijing, teachers still struggle to implement student-centred approaches due to cultural differences between Western and Chinese culture and examination pressure (Liu & Feng, 2015). However, reform has also led to *decentralized centralism* which, in Shanghai, has devolved a certain amount of power to the local level. This autonomy has given schools more room to design and develop about one third of their curricula, including elective courses (Tan, 2013). Although high stakes examinations like the *gaokao* continue to exert a powerful influence on teacher beliefs concerning content and pedagogy, the New Curriculum Reform has led to the creation of more school-based subjects. As Razfar's (2012) study suggests that informal spaces can be effective in scaffolding new knowledge, elective courses could be used as informal spaces in which to set up activities that draw on students' out-of-school knowledge. This will be picked up again later in this article.

Beyond an Arts and Crafts Approach

Reform has also led to changes in education for China's ethnic

minorities. Tan's (2016c) description of an ethnic school serves as a good starting point for discussing what socially just education for minority students currently looks like in the Chinese context. The school described by Tan (2016c) caters to a range of minorities, including Hui, Uyghur, and Mongolian. Its school-based curriculum emphasises the arts and crafts of ethnic groups. Because the curriculum is school-based, students do not need to be assessed by summative or written tests but are assessed informally and developmentally by formative assessment rubrics. One positive outcome of reform and the development of school-based curriculum has been the creation of more space in which teachers are free to develop pedagogies that draw on students' out-of-school knowledge. However, the focus on arts and crafts presents a rather narrow view of minority culture as it represents just a few potential areas from which funds of knowledge can be drawn. As the literature review highlights, there are many areas of funds of knowledge; therefore, the strategies employed to uncover them need to be predicated upon approaches to culture and knowledge that are constructivist in nature. The focus on arts and crafts, while ostensibly designed to valorize ethnic culture, actually has the opposite effect. The curriculum presented in Tan's (2016c) paper runs the risk of reifying minority culture, presenting it as something that is ahistorical and acontextual. However, this approach neglects and devalues students' lived experience (Amanti, 2005) and fails to acknowledge the diverse nature of students' funds of knowledge. Moreover, the focus on arts and crafts can be critiqued for feminizing ethnic culture. The feminization of ethnic minorities "reflects the application of gender hierarchies to ethnic relations, subordinating those minority groups to the Han Chinese" (Hillman & Henfry, 2006, p. 267). For a funds of knowledge approach to be truly effective in promoting social justice, teachers first need to see beyond limited approaches to culture which are static, normative and exclusive. This narrow approach to culture is encapsulated by Amanti's (2005) chapter title, *Beyond a Beads and Feathers Approach*, which can be rephrased to fit the Chinese context: Beyond an arts and crafts approach. It is for this reason that I suggest Hogg's (2013) collaborative team approach as an effective strategy for

teachers to adopt in the Chinese context. Firstly, collaboration fosters dialogue and reciprocity which can lead to the transformation of deficit thinking. Secondly, putting students into different teams ensures that new knowledge is being produced which can then be used as a space for fostering critical pedagogies. Thirdly, the collaborative team approach forces teachers to move beyond an “arts and crafts approach” to socially just teaching as the funds of knowledge produced are diverse and heterogeneous. Finally, the extended network that is created by collaborative teams comprised of teachers, students and parents, could help researchers to build the *guanxi* networks (connections) necessary for gaining access to students’ households.

The remainder of this article will sketch how teachers could use elective courses and school-based curriculum to develop activities, such as neighbourhood walks and symbolic artifacts for drawing on students’ funds of knowledge.

Collaborative Neighbourhood Walk

As suggested by Sugarman (2010), teachers who live close to, or in, their students’ local communities could make use of a neighbourhood walk as a way to simultaneously gather and elicit funds of knowledge. Students guide the teacher through the neighbourhood, pointing out interesting features and their significance to residents and the functioning of the neighbourhood. The teacher could also ask students to name places in the local community that resonate with them by using their home language. The neighbourhood walk thus functions as a strategy for eliciting students’ local knowledge and home language which can then be valorized in the classroom in cross-disciplinary curricula as suggested by Hughes and Greenhough (2006). For example, in a geography lesson students could produce maps of their hometowns or local communities. In a Chinese and/or English lesson, students could produce a travel brochure of their hometown or communities, giving recommendations for places of interest to visit and providing useful expressions in their local dialect. In the case of *neidi*

students³—minority students who are sent away from their local communities to study inland—the neighbourhood walk can be adapted to become a *virtual* walk in which students utilize the Internet and other forms of new technology such as mobile phones as technologies for drawing on their local funds of knowledge. Students contact friends and family back home to provide photos and information for activities like the travel brochure. The (virtual) neighbourhood walk not only reaffirms vital connections to family and local communities, but also provides opportunities for establishing links between the curriculum and out-of-school knowledge. It also draws on students’ digital funds of knowledge and also creates new forms of knowledge through multimodality. In addition, the teacher can also use the funds of knowledge gathered to expand their own thinking about minority students and their cultures to escape the insidious snare of deficit thinking.

The neighbourhood walk could also be used to elicit the funds of knowledge of city-born migrant children, but would need to be adapted to accommodate their liminal status between two worlds, that is, city-born migrant children may not be able to identify with either rural or urban contexts as they are physically removed from the former and spatially and socially segregated by the latter. Students could be asked to construct a neighbourhood walk based on what they imagine their rural community to look like or based on their parents’ or family members’ descriptions. This activity also involves drawing on parents’ funds of knowledge while also creating a link between the home and the classroom. Activities such as this may help city-born migrant children to construct an identity that draws on both rural and urban contexts. However, students may equally identify with their urban communities. Therefore, care needs to be taken to ensure that the (virtual) neighbourhood walk does not unwittingly reproduce deficit thinking that equates migrants as synonymous with a rural context. Sellar and Cormack’s (2009) collaborative pedagogies and Hogg’s (2013) team based collaboration could be an effective strategy for designing the

³ For a more detailed account of *neidi* students see Z. Y. Zhu (2011). School life and ethnic identity: A case study of Tibetan student narrative. In J. Phillion, M. T. Hue, & Y. X. Wang (Eds.), *Minority students in East Asia: Government policies, school practices and teacher responses* (pp. 65–86). New York, NY: Routledge.

neighborhood walk and ensuring that the funds of knowledge being drawn on are authentic, and not the product of teachers' deficit thinking.

Symbolic Artifacts

In contrast, the artifact (Zipin, 2009) and shoebox activities (Hughes & Greenhough, 2006) draw on funds of knowledge from a variety of contexts. The shoebox activity identifies and draws out funds of knowledge by getting students to select a number of personal artifacts which could also be used across the curriculum. Although the artifacts selected for the activity are likely to be found in the household, they correspond to contexts beyond the local community (Moje et al., 2004). For example, a sizeable proportion of China's minority groups are followers of Islam; therefore, the *Quran*, the Muslim's holy book, is an example of a symbolic object that has deep resonances in both the home and global contexts. A more common object could be a laptop computer or a mobile phone⁴. These devices connect the individual to the household and the local community but also extend outwards by allowing individuals to navigate cyberspace and to negotiate new hybrid identities that blur the boundary between the local and the global. Objects such as these allow the teacher to access both students' community funds of knowledge and their hidden funds in the form of vernacular literacies (Hattam et al., 2009) embedded within local communities, and increasingly, hybridized with global cyber communities. The notion of vernacular literacies, however, may need to be redefined in the Chinese context as some of the literacies identified by Hattam et al. (2009), such as rap music, may not have a corresponding referent within minority and migrant cultures. The activity also destabilizes the rural-urban dichotomy by showing that city-born migrant children can belong to both worlds which could also lead to the transformation of teachers' and urban children's deficit thinking that tacitly associates city-born migrant children with the rural

⁴ While it cannot be assumed that disadvantaged students will all have access to these items, their potential to unearth "authentic" funds of knowledge from a range of contexts, particularly cyber communities, suggests an interesting direction for future research.

context.

The shoebox activity has a logistical advantage over the neighbourhood walk because it allows the students to bring their funds of knowledge into the classroom, thereby circumventing the issue of accessibility. Moreover, it can also be accommodated within China's assimilationist language policy. Students present their boxes using either *Putonghua* or English, but are also encouraged to draw on their home language as a fund of knowledge. The importance of a bilingual learner's mother-tongue in assisting in second language acquisition has been well researched by Cummins (2007) who encourages the promotion of a learners' first language in scaffolding linguistic and conceptual understanding in the second. Although this approach could be critiqued for reinscribing subtractive bilingualism, it nevertheless allows students' out-of-school knowledge to leak into the classroom, thereby destabilizing the boundary that separates the two.

Funds of Knowledge for the Han majority?

Finally, consideration must also be given to China's majority ethnic group, the *Han*. Extending social justice to this dominant group is contentious because it risks empowering the empowered. However, against a backdrop of inclusive multiculturalism, there is a case to be made for including the *Han* majority as beneficiaries of the funds of knowledge concept. My focus is limited to *Han* students studying international curricula, such as the IGCSE (International General Certificate of Education) and the IBDP (International Baccalaureate Diploma Programme) in *internationalized* schools as I have experience of teaching in this context. Internationalized schools retain the top-down structure typical of government run schools, but aim to provide prospective study abroad students with an international perspective. They are also private and charge entrance fees, but provide an alternative to international schools whose tuition fees are often prohibitively expensive and also require students to hold an international passport. It also has to be noted from the author's

experience that internationalized schools tend to have more flexible English language requirements than international schools. While Chinese learners in an internationalized context are not disadvantaged in the socioeconomic sense like minority and migrant children, they are nevertheless linguistically, culturally and pedagogically disadvantaged by international curricula that deploy English as the default language of instruction and assessment. Although children in Shanghai start learning English in Grade 1, the subject is taught as a foreign language with an emphasis on grammar and reading as these two skills carry the most marks on the *zhongkao* (high school entrance examination) and *gaokao* (university entrance examination) examinations. Teachers thus make use of memorization and repetition as strategies for teaching knowledge content as they are considered to be the best fit for “teaching to the test.” As a result of their prior learning experiences, many Chinese students possess cultural scripts that clash with “Western” styles of teaching, such as constructivism (Anderson, 1993; Boyle, 2000). Western styles of teaching become imposed when teachers fail or refuse to valorize their students’ prior funds of knowledge—subject knowledge—or funds of pedagogy, such as teacher-centred learning and knowledge transmission (Zipin, 2009). An “authoritarian” approach to teaching could result in pedagogical and cultural discontinuity; a breakdown of learning that results in frustration on both sides of the teacher’s desk (Lovelace & Wheeler, 2006). Teachers need to be aware that Chinese students possess valuable funds of knowledge that can be drawn on to build a scaffold that not only can help students transition from a Chinese cultural script to an international script but also to construct hybrid scripts that combine elements of both.

Conclusion

This article has shown that the funds of knowledge concept could be an effective and socially just way to empower ethnic minorities and city-born migrant children, who are educationally disadvantaged by

policies that marginalize their out-of-school knowledge. It also speculates on what a funds of knowledge approach might look like in the Chinese context by synthesizing the literature on policies for migrant and minority students with the literature on the funds of knowledge concept. In so doing, it offers Hogg's (2013) collaborative team approach as a tentative approach that could allow teachers to identify and draw on a diverse range of students' funds of knowledge. It also offers a narrower approach which is likely to be easier for teachers to implement within existing possibilities-within-contraints. This approach involves utilizing the informal space of elective courses for drawing on students' funds of knowledge. Because elective courses are not assessed by high stakes external examination, traditional cultural scripts for teaching and learning can be rewritten. Elective courses could then be used to support strategies for eliciting funds of knowledge, two of which are the (virtual) neighbourhood walk and a variation of the shoebox activity. The funds of knowledge created in the elective courses can then be used across the curriculum in order to make connections between subjects, and between out-of-school-knowledge and in-school knowledge. Because these activities do not require access to students' households, they offer teachers a great deal of flexibility. This flexibility is necessary in order to accommodate the demands of the two high stakes examinations, the *zhongkao* and the *gaokao*. Although elective courses are not assessed, some teachers use the space allocated to elective courses to prepare students for the examinations mentioned above (Tan, 2013). Flexibility is also essential for teachers to manoeuvre around potentially subversive funds of knowledge. The elective space, due to its relative autonomy, provides a safe zone in which to trial and develop the funds of knowledge concept. The approaches suggested have many potential applications within the Chinese context, including secondary schools, but could be most effective during primary school. By secondary school, students are likely to have become so entrenched in disadvantage that their educational trajectories are irrevocably blocked. Focusing on younger learners, however, could help to give momentum to their educational trajectories. This is not to exclude older learners from benefitting from

the funds of knowledge concept⁵, but to underscore the need to begin socially just learning at a young age in order to better combat cumulated disadvantage (Hao et al., 2014). This need is also supported by the fact that most funds of knowledge projects focus on primary learners (Hogg, 2011). The funds of knowledge concept could also be of benefit to *Han* students in an internationalized context, although this needs to be debated further as it calls into question the social justice imperative at the heart of most funds of knowledge approaches.

However, there exist a number of limitations to this article due to its formative research design. Firstly, it makes use of literature review in lieu of primary data as currently there has yet to be any empirical research into the effectiveness of funds of knowledge in the Chinese context. As a result, the conclusions offered are tentative, and need to be augmented or modified by future empirical research. Secondly, there remain many unanswered questions that future research could answer, the most pressing of which is how (and if) the funds of knowledge concept can be implemented in truly disadvantaged contexts. While the suggestions presented in this article are designed to be implemented by individual teachers working within the constraints of the system, the opening up of curriculum space is still limited to affluent cities like Shanghai. Therefore, while the funds of knowledge strategies presented have potential application in similarly affluent cities, they may need to be modified or completely transformed to fit less affluent rural teaching contexts located in towns and villages. Future research could also explore ways to combine the funds of knowledge concept with student-centred approaches like formative assessment, and to assess its efficacy as a strategy for drawing on the out-of-school knowledge of disadvantaged learners. Another limitation of the “possibilities-within constraints” approach is its tendency to present a rather narrow vision of students’ funds of knowledge. However, this approach is designed as a starting point for teachers who are new to the funds of knowledge

⁵ For a discussion of funds of knowledge and adult education see H. Oughton (2010). Funds of knowledge: A conceptual critique. *Studies in the Education of Adults*, 42(1), 63–78; and J. J. Van Niel (2010). *Eliciting and activating funds of knowledge in an environmental science community college classroom: An action research study* (Unpublished doctoral dissertation). University of Rochester, Rochester, NY.

concept; therefore it would be expected that teachers develop more detailed and varied strategies as their familiarity and confidence with the approach develops. Future experiments with these approaches could then be developed into a more systematic framework.

It is hoped that educational reform in China continues to downplay the importance of high stakes examinations like the *zhongkao* and the *gaokao* so that more space can be created in the curriculum to accommodate innovative and socially empowering approaches like the funds of knowledge concept. Although the space is currently very small, there is still room to bring about possibilities-within-constraints.

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