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The Culture of Education Policy Making: Curriculum Reform in Shanghai

Charlene Tan

Abstract

This paper explores the culture of education policy making in Shanghai using the conceptual tool of a ‘global assemblage’. A global assemblage is essentially a collection of ideas and practices that arise from the interplay between a global form and situated socio-cultural elements. Focussing on the global form of curriculum reform, this paper explains how the Shanghai municipal government justifies the introduction of the ‘Second Curriculum Reform’ using the global imperative while maintaining its socialist ideology and central control on high-stakes exams. This paper highlights the active roles played by the municipal government and other local educational stakeholders in assembling their own logics, tactics and counter-measures in the contested space of the assemblage. It is argued that the success of the curriculum reform is mediated and vitiated by the socio-cultural elements of a dominant exam-oriented culture and the traditional approaches of memorisation, repeated practice and didactic teaching. The complex and unpredictable process of implementing curriculum reform in Shanghai illustrates the culture of education policy making against a backdrop of globalisation as a problem space.

In a recent article published in this journal, Aaron Koh (2011) discussed the culture of education policy making using the conceptual tool of a ‘global assemblage’ for Singapore. Noting that Asian education systems are under-researched and under-represented in the discourses on an emergent global/ising education policy, he expressed the hope for other researchers to examine culture-specific aspects of education policies and practices in Asia. This paper aims to continue the line of inquiry started by Koh by exploring the culture of education policy making in another Asian society: Shanghai. The choice of Shanghai is appropriate as its municipal government, like the Singapore government, has been actively involved in reviewing and reforming its education policies and practices to prepare its people for the challenges of globalisation. Against a backdrop of global competition through international assessments and comparison, Shanghai offers an interesting case study since it has topped the 2009 International Programme for Student Assessment (PISA) (see OECD, 2010a, b for details). This paper begins with a conceptual discussion of globalisation and global assemblage, followed by an introduction to education in Shanghai and its current curriculum reform. The second half of the paper examines the extent to which the curriculum reform has been successful in Shanghai, given the prevailing socio-cultural context.

Globalisation and a Global Assemblage

Our discussion of education policy making in Shanghai is located within a discourse that sees globalisation as a ‘problem space’ – a situation where the local forms and values of

individual and collective existence are problematised by being subjected to political, technical and ethical reflection and intervention (Collier & Ong, 2005). The term ‘problem space’ serves three important functions. First, it signifies that that globalisation is not a simple process of secular transformation that is totalising, homogeneous, stable, universal and transcendental. Rather, the specific interpretations, manifestations and effects of globalisation vary from locality to locality, depending on globalisation’s interplay with situated socio-cultural elements. These situated elements include local histories, politics, cultures, relationships, logics, ethics and circumstances. As a result of the interaction between global and local, globalisation brings to a locality not just positive changes and solutions but also challenges, anxieties, tensions, dilemmas, resistance and conflicts.

Secondly, the concept of problem space, rather than simply ‘problem’, reminds us that a problem is not a problem until it is being interpreted as such by a person who is confronted with it. The problem exists in a common space where different people bring with them alternative perspectives, views and opinions (Jonassen, 1997). It follows that there is more than one problem-solver; in the case of globalisation, the problem-solvers are the local actors who act and react (and not necessarily collectively or harmoniously with one another) to global forms and changes.

Thirdly, the recognition of globalisation as a problem space enables us to understand the nature of a ‘global assemblage’. A global assemblage is essentially a collection of ideas and practices that arise from the interplay between a global form and situated socio-cultural elements. A ‘global form’ is a phenomenon that is broadly encompassing, abstractable, mobile and dynamic, moving across diverse social and cultural situations and spheres of life (Collier & Ong, 2005, p. 11). Examples of global forms are stem cell research (Collier & Ong, 2005), neo-liberal rationality (Ong, 2007), an emergent global education policy (Koh, 2011), and curriculum reform (the focus of this paper). A global assemblage is the site where global forms are articulated or territorialised in specific situations; it is characterised by interactions, tensions, contestations, cooperation, change and transformation between the global form and situated elements, as well as among the situated elements themselves (Collier & Ong, 2005).

It is important to emphasise the role of the ‘assemblers’ in a global assemblage. In defining a global assemblage as ‘a machinery of ideas, tactics and practices assembled to deal with a problem at a historical time and contextual moment’ (p. 271), Koh focuses on the role of the state in orchestrating global techniques, situated politics and ethics to engage with the global. In his case study of Singapore, he argues how the state is the assembler that takes the lead in conceptualising and launching assemblages such as the ‘Thinking Schools, Learning Nation’ vision for the country. While I agree with Koh that the state is often a dominant assembler, especially in the case of Singapore, we should not therefore conclude that the state is the sole or main assembler in all situations. Instead, it is important to highlight the existence of multiple actors or ‘assemblers’ orchestrating, and attempting to orchestrate, their respective machinery of ideas, tactics and practices to further their own agendas. That is why the notion of globalisation as a problem space is instructive: it underscores the existence of *many* problem-solvers, each with their own perspectives on and solutions for, the *same* problem.

In short, a global assemblage comprises multiple assemblers with heterogeneous interpretations, perspectives, logics, ethics and responses with regard to the phenomenon of globalisation. In what follows, I shall illustrate the complex and contested nature of a global assemblage using the case study of curriculum reform in Shanghai.

Introduction to Education in Shanghai

Shanghai is the largest city in China with a population of 20.7 million (OECD, 2010b). Arguably the city with the most developed basic education system in China, Shanghai was the first city to implement the nine-year compulsory education. This means all students in Shanghai have to complete five years of primary education and four years of junior secondary education. After sitting for the junior secondary exams, almost all students proceed to the senior secondary (high school) level for another three years of study where they will sit for the senior secondary exams (also known as national college entrance examination) to qualify them for higher education. Shanghai enjoys high enrolment rate across the levels: 98% of the age cohort attended preschool programmes, 99.9% of the age cohort attended primary and junior secondary school, 97% of the age cohort attended senior secondary school (general and vocational), and over 80% of the city's higher education age cohort are admitted into higher education (Shanghai Municipal Government, 2010, as cited in OECD, 2010b).

It is helpful to give a brief historical overview of the curriculum reform in China in general and Shanghai in particular. The first decade after the establishment of the People's Republic of China in 1949 witnessed the introduction of locally produced teaching materials based on the Soviet model (Zhu, n.d.). The government launched an 'education revolution' in 1958 to signal its major attempt to promote socialist and agrarian education. That lasted until the Cultural Revolution (1966-1976) where all universities were closed and intellectuals were incarcerated or sent to hard labour in the rural areas. The educational system was rebuilt after 1976 and a national high school exam was introduced in 1977. Modern education reforms began in 1985 when then Chinese leader Deng Xiao Ping stressed the need to develop human talent through education reform. The 'First Curriculum Reform' (1988-1997) marked a series of major educational changes aimed at preparing schools to meet the needs of rapid economic developments in China. The reform centred on raising student quality by combining societal needs, student development and the structure of school subjects into an integrated curriculum (Zhu, n.d.). A major change is the introduction of three types of subjects: compulsory subjects, electives, and activity-based subjects, with the aim to nurture the students' basic attitude, knowledge, and ability. The reform measures were piloted in 1991, and incrementally rolled out for different levels: primary one pupils from 1992, senior high year one from 1995, and all grades in all cities from 1997 (Zhu, n.d.).

Current Curriculum Reform in Shanghai

The 'Second Curriculum Reform' (1998-present) started in 1998 with the publication of a number of policy papers to inform educators of the impending changes. The reform measures were piloted in 179 selected kindergartens, primary and secondary schools in 2002, and are fully implemented in all Shanghai schools today (Zhu, n.d.). We shall analyse the curriculum reform in terms of its rationale, aims, pedagogy, curriculum, and assessment as outlined in two key policy papers.

In a document entitled 'Explanation of the Draft Curricular Plan for Mainstream Primary and Secondary Schools in Shanghai City', the Shanghai Municipal Education Commission states that the reform measures are intended to 'meet the demands of a knowledge economy' (Shanghai Municipal Education Commission, n.d.). Such an economy, the paper explains, is characterised by the rapid expansion, dissemination and obsolescence of increasingly esoteric knowledge that is powered by information technology. The implication for schooling in Shanghai is the need to 'shift from the traditional mode of transmitting human cultural knowledge to cultivating an innovative spirit in the students'. Guided by the philosophy that 'true strength lies in the ability to acquire knowledge', the aim

is for schools to focus on building the students' character and raising their ability to 'acquire, add to, exchange and apply knowledge, as well as to carry out research and solve problems'. The desired outcome is 'quality-oriented education', rather than 'exam-oriented education', for the modern era through education reform. The document adds that many countries such as the United States, Britain, France, Australia, Japan and Korea have already turned to education reform as a strategy to strengthen their human capital and ensure their country's international competitiveness. Referring to the international trend towards curriculum reform, the document states that it is imperative for China to similarly review its curriculum for basic education so as to improve the Chinese citizens' quality for the sake of national progress. Stressing Shanghai's status as one of the most developed and progressive cities in China, the paper states that Shanghai needs to take the lead in reforming its curriculum to achieve the above aims in China.

Another policy paper, 'Curricular Plan for Mainstream Primary and Secondary Schools in Shanghai City' by the Shanghai Municipal Education Commission elaborates on the aims of the reforms (Shanghai Municipal Education Commission, 2004). The paper states that the curriculum reform is underpinned by two guiding philosophies: 'education needs to focus on the world, the future, and modernity', and 'education must serve modern socialism, be aligned with economic productivity, and nurture participants and leaders of socialism who are developed morally, intellectually and physically'. Accordingly, the reform is geared towards the holistic development of the student in the moral, intellectual, physical, aesthetic and social aspects through diverse learning experiences. Directed at promoting the student's lifelong learning, the reform hopes to provide students with foundational knowledge and skills so that they have the ability to be open-minded and acquire an international vision. To do so, the curriculum reform will capitalise on Shanghai's strengths in internationalism and Information and Communication Technology (ICT) to enable students to acquire 'an innovative spirit and real-life ability'. The overall objective is to reform education to meet the demands of the 21st century in Shanghai.

A key reform focus is to 'change the learning style'. The reform aims to transform the current knowledge transmission approach where students tend to study primarily for passing the exams and learn passively through didactic teaching. The Shanghai authority hopes to get schools to 'move away from repetitive and mechanistic rote-learning towards increased student participation, real-life experience, capacity in communications and teamwork, and ability to acquire new knowledge and to analyse and solve problems' (Ministry of Education 2001, as cited in OECD, 2010b, p. 90). By giving students avenues to experience, research, and discover, the spotlight is on 'student-directed research, practical experience and interaction with others by encouraging students to actively inquire, experiment, innovate and pursue excellence' (Shanghai Municipal Education Commission, 2004). The objective is to take learning beyond the exams to active engagement with the community through social practice, community service, and vocational education. This means encouraging teachers to adopt more student-centred pedagogies where students can relate what they learn to real life, exchange ideas with one another, and contribute actively in class. For example, in teaching the topic of velocity for junior secondary Physics, the teacher could link the topic to real life examples such as the movement of the escalator and train; in teaching music, the teacher could encourage the students apply what they have learnt using movies (Jiafang ribao, 2004).

To bring about a change in the students' learning style, the new curriculum is guided by 'the principles of consolidating the foundation, promoting progress, inspiring innovation, emphasising practice' (Shanghai Municipal Education Commission, 2004). The curriculum has been revised to provide students with more opportunities to engage in more active learning activities based on their interests and aptitudes. Such a curriculum serves to transform learning from discipline-based knowledge to more comprehensive and balanced

learning experiences, and from pure ‘bookish’ knowledge and to improve relevance and interest in the content of a curriculum (Ministry of Education, 2001, as cited in OECD, 2010b). The new curriculum covers eight domains of learning: language and literature, mathematics, natural sciences, social sciences, arts, skills (including ICT), sports and fitness, and integrated practical learning. The last domain comprises community service and other activities that serve to motivate students to engage with the community. The curriculum is divided into three subject categories: Foundational Subject, Expanded Subject, and Inquiry/Research Subject (see Table 1).

Table 1: The Curriculum in Shanghai

Domains of Learning	Subject Category		
Language and Literature	Foundational Subject	Expanded Subject	Inquiry/Research Subject: Type I and Type II
Mathematics			
Natural Sciences			
Social Sciences			
Arts			
Skills			
Sports and Fitness			
Integrated Practical Learning			

Source: Shanghai Municipal Education Commission (2004)

Foundational Subjects are standardised subjects that are compulsory for all students. They represent the basic requirements from the Shanghai municipal government to nurture ‘quality citizens’ for the country. The Expanded Subjects, on the other hand, are intended to cater to the students’ different interests and learning abilities as well as society’s needs. There are two types of Expanded Subjects: Compulsory Expanded Subjects focus on real-life application in society, while Elective Expanded Subjects centre on the various domains of learning such as language, sports and fitness, and arts.

Inquiry/Research Subjects serve to help students to ‘learn to learn’, inspire them to learn and conduct research independently, and apply what they have learnt in real life. It is known as Inquiry Subject from the primary to the lower secondary levels, and Research Subject at the senior secondary level. Inquiry/Research Subjects comprise two types: Type I research focuses on a specific topic or question based on the student’s interest and is carried out by the student independently under the guidance of the teacher. Unlike Type I research where the content tends to be multi-disciplinary, Type II research is more directly linked to the Foundational Subjects where the student conducts research on specific disciplinary knowledge. Inquiry/Research Subject aims to help students to exercise their cognitive and affective faculties, construct knowledge, and solve problems. Examples of Research topics include ‘Probability of winning the lottery’, ‘Problem of housing mortgage’, and ‘Introduction to mathematicians in ancient China’ (Jiafang ribao, 2004). By providing three categories of subjects, it is hoped that the students from primary to senior secondary levels will be given more options to choose courses based on their interests and aptitude while being commonly grounded on a firm foundation of basic content knowledge.

Another key change in the reform is the emphasis on greater school autonomy. By moving away from centralisation, more leeway is now given to the schools to adapt the curriculum to suit local relevance and needs (Ministry of Education, 2001, as cited in OECD, 2010b). School leaders are free to design about one-third of their curricula for the implementation of Expanded Subjects and Inquiry/Research Subjects. This means students

could choose what they wish to study for about 35% of their curriculum time (Jiafang ribao, 2004). Schools now offer a variety of Expanded Subjects such as archery, robotics, and 'Philosophy for Children' (P4C) programme. To encourage real-life learning, many schools take their students outside the classroom to visit the science centre, museums, historical sites and other places of interests. Inquiry/Research Subjects are also launched in many schools through partnership with universities such as Fudan University and other higher institutions.

To support the aim of preparing Shanghai students to engage with others outside China in a globalised world, the curriculum reform has also strengthened the students' learning of English. By making English compulsory from primary one onwards (instead of primary three in the past), the goal is to give students at least nine years of English learning. This change is prompted by the authority's awareness that English is essential to help students to access information in a knowledge-driven, digital and modern world. The learning outcome is not just written proficiency, but all-rounded proficiency in listening, speaking, reading and writing. To achieve the above-mentioned goal, many schools have designed their own teaching materials that are appropriate for their students, hired native speakers of English for their schools, and sent their students to Europe, United States, and Australia for short-term immersion (Shanghai Municipal Education Commission, 1998). Reinforcing the teaching of English are plans to upgrade the teachers' skills, introduce new teaching materials, and enhance a bilingual learning environment for the students. Another initiative is to make ICT compulsory for students primary three onwards. Through greater opportunities for students to engage with ICT, the goal is for them to 'learn about ICT, utilise ICT, and learn using ICT'.

Accompanying the curriculum reform is the change in assessment. The goal is to 'de-emphasise the screening and selective functions of assessments and instead to emphasise their formative and constructive functions' (Ministry of Education, 2001, as cited in OECD, 2010b, p. 90). There is a deliberate move to reduce the studying burden for the students by removing content that is out-dated or encourages rote-learning and memorisation. Compared to the past, the current assessment has cut down on multiple-choice questions and included questions that test the application of real-life skills (Singmaster, 2010; Tan, forthcoming). For example, the assessment for mathematics has reduced the number of questions that test mere calculation and include instead questions that test the structure and value of mathematics; likewise for Chemistry, the number of exam questions has been reduced to give the students more time to reflect (Jiafang ribao, 2004). Additionally, there is a greater emphasis on formative and holistic assessment rather than purely summative and academic assessment. Teachers are reminded to go beyond the students' exam scores to develop the students' moral quality, citizenship quality, learning ability, social interaction and cooperation, and participation in sports, health and aesthetics. Rather than just assessing the end results through summative assessment, teachers should track the students' learning process and developmental progress through alternative assessment tools such as the 'Growth Record Booklet' for each student (Shanghai Municipal Education Commission, 2006). In line with the desired outcome to nurture the students holistically, schools are also encouraged to identify and develop their niches in various areas such as ICT, English, arts and sports. Consequently, there are now schools that specialise in performing arts, chess, pottery, and ballet (Shanghai Municipal Education Commission, 1998).

The Municipal Government in the Global Assemblage

The Shanghai municipal government, as a dominant assembler in formulating curriculum reform, has orchestrated a machinery of ideas (for example, 'meet the demands of a knowledge economy' and 'quality-oriented education') and practices (for example, launching Expanded and Inquiry/Research Subjects, and the 'Growth Record Booklet'). Two

observations can be made about the Shanghai authority's assemblages. First, the Shanghai authority justifies the 'Second Curriculum Reform' using the global imperative of the need to reform education to meet the challenges of globalisation. The curriculum reform in Shanghai mirrors the transnational pressure and tendency of policymakers worldwide to adopt global/ising education policy so as to prepare their graduates for the 21st century. Applying policy transfer and borrowing, many countries highlight the value of life-long learning, higher order thinking skills, better utilisation of technology in education, holistic assessment, decentralisation and devolution of power to principals (Angus, 2004; Phillips & Ochs, 2003; Tan, 2008). The references in Shanghai's official document to 'meeting the demands of a knowledge economy' and education reforms in developed countries such as United States, Britain, and Japan testify to Shanghai policymakers' desire not to lose out in the race by borrowing similar policies and practices for the city.

The second observation is that the Shanghai authority, in borrowing education policies and practices from abroad, continues to maintain its socialist ideology and central control on high-stakes exams. It is interesting to note that the curriculum reform measures – moving away from an exam-oriented, memorisation and passive learning towards a quality-oriented, higher-order thinking and active learning, decentralisation, greater school autonomy and more choices for students – resemble neo-liberal education policies and practices that are more commonly found in Anglo-phone societies. However, the acceptance of neo-liberal global education policy does not imply that the Shanghai government has embraced neo-liberal values and logics. On the contrary, the Shanghai municipal government reflects the Chinese government's over-riding justification of using neo-liberal policy and logic as means of control and discipline, such as regulating China's population growth (Collier & Ong, 2005). To borrow Ong (2007)'s words, the curriculum reform is 'opportunistically combined with the socialist state's aspirations' so as to produce 'self-reliant but state-dominated professionals' (p. 6). Similar to the case in Singapore (Koh, 2011, also see Tan, 2008, 2010), the Shanghai authority has assembled a machinery of values and tactics to further its enduring logic of survival and pragmatism. High student performance in international assessments such as PISA, as well as the adoption of curriculum practices found in developed and predominantly Western countries, are regarded by the Shanghai government as affirmation of the city's modernisation and success in the international arena.

An indication that the Shanghai authority has not accepted the neo-liberal practice of decentralisation and school autonomy is seen in its continual control over high-stakes exams. As the topic of exams is closely linked to other educational stakeholders in Shanghai, I shall postpone the discussion to a later section.

The Success of the Curriculum Reform in Shanghai and PISA

How successful is the curriculum reform in Shanghai? Some educators in China have argued that Shanghai's outstanding performance in PISA demonstrates that its curriculum reform has been successful. The OECD report notes:

Local experts believe that this is evidence of successful reforms, whereby students are now exposed to a much broader knowledge base and are trained to integrate their knowledge and tackle real-life problems. Students have also become used to identifying questions of interest to themselves, and to make open-ended explorations. All these changes are markedly different from the traditional Chinese pattern in which students learn subjects by heart and regurgitate such knowledge in examinations (OECD, 2010b, p. 98).

It is beyond the scope of the paper to discuss the extent to which the PISA assessment design, questions, procedure and analysis accurately reflect the learning ability of students in and across countries. In the context of a global assemblage, suffice it to say that the Organisation for Economic Co-operation and Development (OECD) (the organisation that administers PISA) is an assembler with its own ideas and practices even as it measures and compares countries using international assessment. What this paper wishes to focus on, instead, is the relationship between PISA and curriculum reform in Shanghai. We should not conclude that Shanghai's curriculum reform has been successful based on its PISA achievements. On the one hand, it is true that the desired outcomes of Shanghai's curriculum reform are broadly aligned with those of PISA. OECD states that PISA does not seek to assess the students' mastery of the school curricula. Rather, it focuses on the students' learning for tomorrow's world, their knowledge and skills for life, and their readiness for lifelong learning by assessing their ability to use their knowledge and skills to meet real-life challenges (OECD, 2010a). Accordingly, it defines 'literacy' as the 'students' capacity to apply knowledge and skills in key subject areas and to their ability to analyse, reason and communicate effectively as they pose, interpret and solve problems in a variety of situations' (OECD, 2010a, p. 3). The above aim of PISA dovetails with Shanghai's curriculum reform goal to promote the student's lifelong learning, innovative spirit and real-life ability through student-directed research and practical experience.

However, the crucial question here is not whether PISA assesses students' ability to use their knowledge and skills to meet real-life challenges, but whether it assesses the students' ability to use their knowledge and skills to meet real-life challenges *in real life*. In other words, how far do PISA questions reflect 'real-life challenges' in 'a variety of situations' in reality? In an insightful article, Dohn (2007, p. 7) rightly points out that 'the "real life" situation that the students are participating in is a test situation, and in this situation they are then given problems describing other situations of "real life"'. Take the case of mathematical literacy:

PISA *does not* in any adequate way assess 'the students' abilities to apply mathematical concepts etc.' to *actual* 'authentic problems that arise in real world settings' but at most assesses the 'students' abilities to apply mathematical concepts, etc.' to problems *situationally framed* by the survey test and with content recognisably similar to aspects for real world settings" (Dohn, 2007, p. 9).

The above argument is not to discredit the quality of PISA's questions, nor to downplay Shanghai's impressive achievement in PISA. The point here, rather, is that there is a fundamental difference between a *testing* situation and a *real-life* situation. Furthermore, what is not captured by PISA (and any other written assessments) are educational aims that are usually difficult to quantify and measure, but essential for students to thrive in the 21st century, such as creative and innovative thinking, cross-cultural sensitivity and communication skills. As Grek (2009, p. 27) puts it, the 'focus on "real-life" circumstances and on students' capacity to enter the labour market with core skills, such as literacy and numeracy, has taken PISA's focus of interest away from less explicit educational aims that resist measurement (e.g. democratic participation, artistic talents, understanding of politics, history etc.)'. In other words, the performance of Shanghai in PISA, while highly commendable, only tells us one side of the story. To more accurately evaluate the outcome of Shanghai's curriculum reform, we need to go beyond PISA to the interaction and interplay between the reform and situated socio-cultural elements in the global assemblage.

Key Educational Stakeholders and Socio-Cultural Elements in the Global Assemblage

As pointed out earlier, the global assemblage is a contested site where various stakeholders act and react to the global form and other heterogeneous elements in different ways. Besides the municipal government, the other key actors in Shanghai include the principals, teachers, students and parents. Far from being passive and compliant recipients of public policy, they bring to the space of the assemblage, individually and collectively, their own assumptions, reflections, values, logics, agendas and demands. Like the municipal government, these stakeholders assemble and endeavour to assemble their own arsenal of measures and counter-measures to circumvent discipline and further their own interests. It is important to note that the assemblers' thinking and behaviour are shaped and influenced by local socio-cultural factors. Two situated socio-cultural elements that significantly vitiate the success of the curriculum reform in Shanghai will be discussed in the next section.

A dominant exam-oriented culture

The first situated socio-cultural element is a dominant high stakes exam-oriented culture in Shanghai. Shanghai, as well as the other three Asian societies that excel in PISA (South Korea, Hong Kong, and Singapore) has a long tradition of prizing academic success due in part to its Confucian legacy. In China, academic achievement is the perceived passport to social and economic mobility and success in life, hence the popular sayings in China that 'No poverty is worse than a poor education' and 'One exam will determine your entire life'. Moreover, a highly competitive society with limited university places and the one child policy in China invariably place a huge burden on the students themselves who feel obligated to obtain good grades for the sake of their parents. In a 1998 national survey by the China Youth Research Centre on 3284 primary and secondary students who are the one-child and their parents, 77% of the interviewed one-child children report that they are motivated to study hard for exams because they 'need to repay their parents' (Li & Li, 2010). Many parents, on their part, expect schools to help their students ace the exams and resist any education reforms that they think may jeopardise their children's future (Li & Li, 2010).

Although the curriculum reform has introduced a variety of subjects (Foundational Subjects, Expanded Subjects, and Inquiry/Research Subjects) and promoted holistic development and alternative assessment, the reality as understood by the students, parents, principals and teachers is that success in the high-stakes written exams that test the students' mastery of selected Foundational Subjects is still most important. As mentioned earlier, the municipal government retains central control through standardised exams for the junior and senior secondary students. The junior secondary exam assesses the students on Chinese, Mathematics, Foreign Language (English), Physics, Chemistry, and Physical Fitness (the last subject has a very low weightage compared to the other subjects). Similar to the junior secondary exams, the senior secondary exam requires students to sit for three compulsory subjects, Chinese, Mathematics, and Foreign Language (English), plus other academic subjects such as Politics, History, Geography, Physics, Chemistry and Biology. The students' performance in these two terminal exams is critical as it determines their chance of being admitted into a senior secondary school and university of their choice.

The pencil-and-paper assessment mode is privileged by the government for both exams as it ensures that the assessment is 'objective', 'fair' and 'scientific' based on the exam scores. That is why the Expanded Subjects and Inquiry/Research Subjects are not included in the terminal exams; they cannot be assessed summatively in a written exam as they are not about a particular academic subject, textbook or test question. Rather, they consist of a diverse range of projects, programmes and activities that vary from school to

school, and are assessed through alternative assessment modes such as students' self-reflections and the teachers' observations. These qualitative appraisal methods are perceived by the Shanghai authority as well as the general public to be subjective and open to bias since they cannot accurately (read: quantitatively) assess the ability and achievement of the students. Although the government has increasingly given the universities the autonomy to admit students with exceptional abilities without considering their exam results, such admission is far and few as most universities still require these students to 'prove' their achievements through awards and prizes they have won at the national or regional levels – a standard that very few students are able to attain.

Confronted with the unequal status of Expanded and Inquiry/Research Subjects on the one hand, and Foundational Subjects on the other, many educational stakeholders respond to the curriculum reform in ways that reflect their own logics of survival and pragmatism. In other words, the parents, students, principals and teachers assemble their own machinery of tactics and practices to circumvent and mediate the curriculum reform. The parents and students unsurprisingly value the examined Foundational Subjects more than the Expanded and Inquiry/Research Subjects. Their measures and counter-measures include spending minimal time on the Expanded and Inquiry/Research Subjects, purchasing copious assessment books that prepare the students for the exams, expecting the school to give extra academic classes, and signing the students up for private tuition for the exam subjects (Shangguan, 2005). It is reported that about 80% of the Chinese attend night and weekend 'cram schools', in addition to their nightly homework and extracurricular activities (Singmaster, 2010). A China Report 2009 conducted by Peking University shows that Shanghai students have the second longest study hours per day in China at 13.2 hours, just after Beijing at 14.4 hours (Li & Li, 2010).

For the principals and teachers who are the policy implementors, they have to juggle between offering Expanded and Inquiry/Research Subjects to promote 'quality-oriented education', and ensuring that their students continue to perform well in the terminal exams. That school principals and teachers are still judged by the parents and even some senior education officials primarily on their exam scores rather than the quality of their Expanded and Inquiry/Research Subjects means that an exam-oriented education remains culturally entrenched. Many schools therefore circumvent and mediate the curriculum reform by channelling substantial amount of time and effort to the examined Foundational Subjects, offering Expanded and Inquiry/Research Subjects only to the non-graduating cohort, giving extra classes to students after school hours and on weekends, and even repackaging exam-preparation courses as Expanded or Inquiry/Research Subjects (Shen, 2006; Zhong and Wu, 2007; Tan, forthcoming). A report by the Ministry of Education in 2006, while pointing out that some teachers have changed their teaching practices to be more student-centred, acknowledges that 'quality education is loudly spoken but test-oriented education gets the real attention' (as cited in Zhao, 2007, p. 73).

Traditional exam-oriented approaches of teaching and learning

The second situated socio-cultural element is the preference among students and teachers for exam-oriented approaches of teaching and learning. These approaches – transmission of textual knowledge, memorisation, repeated practice and didactic teaching – are upheld as tried-and-tested methods for students to perform well in high stakes exams. Xu (2007) notes that many Chinese students tend to accept what their teachers teach without questioning and take pride in possessing a high volume of knowledge without articulating their views in class. Correspondingly, most teachers tend to rely on a didactic approach to transmit the 'correct'

answers to students and spend time preparing the marking their students' exercises to prepare them for the exams (Shangguang, 2005; Zhong & Wu, 2007).

Nestled within a high-stakes testing context where textual knowledge, memorisation, repeated practice and transmission teaching style are given a premium, it is challenging for the curriculum reform to achieve its goals of nurturing young people who are life-long learners equipped with the ability to add to, exchange and apply knowledge, conduct research, experiment, innovate and solve real-life problems, and work well with others. After all, the above-mentioned skills and dispositions cannot simply be tested in any written exam. Commenting on the performance of Shanghai in PISA, a well-known Chinese educator acknowledges that the students may be strong in knowledge acquisition and application but they are still weak in creative ability and character development (Zhejiang zaisian, 2010). A survey of 21 countries by the International Assessment of Educational Progress in 2009 reports that China was ranked first in Mathematics skills, but came in 17th in the students' creativity and last in its students' imagination (Yang, 2010). It has also been noted that many China's university graduates working in multinational companies and Chinese companies lack the skills to work independently, work in a team, and learn new skills (Jiang, 2010).

Some readers may wonder how Shanghai could excel in international assessments if the students have been relying on memorisation, repeated practice and didactic teaching – methods that are perceived to be unhelpful and even detrimental to preparing students to solve real-life problems as reflected in PISA. The first step to answer this question is to refer to what is known as the 'paradox of the Chinese learner'. As explained by John B. Biggs: 'westerners saw Chinese students as rote learning massive amounts of information in fierce exam-dominated classrooms – yet in international comparisons, students in the Confucian heritage classrooms greatly outperformed western students learning in "progressive" western classrooms' (as cited in Chan & Rao 2009, p. x). In solving the paradox, it is important to note that memorisation and repeated practice for the Chinese students do not necessarily mean that they are learning by rote or that they lack deep understanding of the subject matter. On the contrary, empirical research has shown that memorisation and repetition for the Chinese students could be used as part of a deep strategy for them to achieve deep understanding, logical thinking and strong application (e.g. see [Biggs, 1996](#); [Biggs & Watkins, 1996](#); [Huang & Leung, 2004](#); [Marton, Wen & Wong, 2005](#); [Chan & Rao, 2009](#)). In a recent research on how Chinese teachers balance the implementation of classroom innovation (in this case, a project on knowledge-building) and preparing students for the exam, a teacher explains:

It is not adequate just to use the knowledge-building approach. I also use drilling and practising examination papers to help students learn ... *But the deep understanding they derived when they were engage in knowledge building would be important for them in recalling the information for the examination* (cited in [Chan, 2009](#), p. 188).

Just as memorisation and repeated practice do not necessarily mean that the students lack understanding, thinking and application, didactic teaching does not necessarily mean that the students are not engaged. Research has shown that although Chinese students are generally quiet in class, they could be actively listening and reflecting in a teacher-dominated lesson (e.g. see [Cortazzi & Jin, 2001](#); [Kim, 2002](#); [Mok, 2003](#); [Li, 2009](#)). Although the students do not articulate their views in class, they are given the opportunity to demonstrate their understanding and application subsequently in the homework questions assigned to them.

Here I need to clarify that I am not arguing that Shanghai students have performed well in PISA because they have achieved deep understanding through memorisation, repeated practice and didactic teaching. Such a claim requires further research on the testing strategies

used by the Shanghai students who sat for PISA – a line of inquiry that is beyond the scope of this paper. What I am arguing, rather, is that the traditional approaches of teaching and learning in Shanghai are compatible with empowering the students to gain a deep understanding of the content knowledge, develop logical thinking, and possess strong application ability to solve real-world challenges in a testing situation such as PISA. The compatibility notwithstanding, it is important to note that performing well in PISA is *not* the same as achieving the goals of the curriculum reform in Shanghai. In fact, the traditional approaches of textual transmission, memorisation, repeated practice and didactic teaching are the *very* targets of the curriculum reform. The reform initiatives have been introduced precisely to propel the students and teachers to go beyond these exam-oriented strategies towards approaches that champion learning beyond the textbook, independent and creative thinking, active participation in class through group discussions and oral presentations, and the teacher as a co-learner and facilitator and not just content expert and a dispenser of knowledge.

Conclusion

Focussing on the global form of curriculum reform, this paper explained how the Shanghai municipal government justifies the ‘Second Curriculum Reform’ using the global imperative while maintaining its socialist ideology and central control on high-stakes exams. This paper highlighted the active roles played by the municipal government and other local educational stakeholders in assembling their own logics, tactics and counter-measures in the contested space of the assemblage. The complex and unpredictable process of implementing curriculum reform in Shanghai illustrates the culture of education policy making against a backdrop of globalisation as a problem space. Underpinning the curriculum reform is an assumption held by the Shanghai policymakers that global education policy is socio-culturally unproblematic for the city. However, this paper has pointed out that this assumption overlooks the mediating power of situated socio-cultural elements in the global assemblage where various local educational stakeholders resist, circumvent and intervene with the curriculum reform.

Our Shanghai case study illustrates that global education policy cannot be simplistically borrowed and transferred from one context to another without considering its interplay with local factors, logics and circumstances in the global assemblage. It follows that policymakers need to be cognisant of situated elements in the space of the assemblage that may aid or hinder the smooth implementation of the education initiatives. With the next PISA taking place soon in 2012, it is likely for Shanghai (and other Asian societies) to be featured prominently among the top performers. Given the trend towards linking international testing and national assessment to efforts to reform educational systems (Kamens & McNeely, 2010), the example of Shanghai cautions us against a simplistic policy transfer and borrowing without considering and incorporating indigenous socio-cultural (counter-)factors.

It is interesting to note that the policymakers in Shanghai have referred to education policy with ‘Chinese characteristics’. For example, the former director general of the Shanghai Municipal Education Commission states that ‘Shanghai is exploring new ways of developing its education with unique Chinese characteristics’ (Shen, 2007, p. xi). Such a synthesis of global and local ideas and practices, if successful, promises to reduce the existing clash between an emergent global/ising education policy and situated socio-cultural elements. What these ‘Chinese characteristics’ are, what role they play in the curriculum reform, and whether they could contribute meaningfully to education changes in Shanghai, are some important questions that will extend the research on the culture-specific aspects of education policies and practices in Shanghai and other parts of Asia.

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