Reflexive risk-education and cosmopolitanism in the risk society

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Abstract
The extreme environment that students face, in terms of the global risk society, is the unintentional and high-risk consequence of the development of modern society. This paper, therefore, aims to discuss the possible strategies beyond traditional school practices for educators to think and act upon based on sociologists’ theoretical views of and empirical studies on the risk society. I will indicate that current education systems are an accomplice in producing modern risks, and will attempt to analyze the gaps between current education and reflexive risk-education. The gaps are: the experiential gap between individuals and the global society, the public-sphere gap between school and society and the epistemological/cultural gap between eastern/non-western and western cultures. Three possible strategies to develop reflexive risk-education are discussed: developing an integrated curriculum through ‘critical glocal pedagogy’, assembling the social network through collaborations, such as with NGOs and creating new social imaginations.

Keywords:
Risk society, reflexive modernity, cosmopolitanism, neoliberalism, NGO
1. The possibility of education in risk society
As both an educator and a global citizen, a split feeling often emerges in my mind. As a global citizen, I am aware of the different forms of risk which have appeared in the global society, including such problems as the greenhouse effect, genetically modified foods, financial crises, the crisis of biodiversity, e-waste and the energy crisis. These risks are not only frequently discussed in the public sphere and represented in the mass media, but have serious impacts on individuals’ lives and the future of subsequent generations. For example, global warming might create 150 million climate refugees by 2050 (Vidal, 2009). Hence how to respond to these hazards has been the subject of intense discussion, both publicly and privately. Such occurrences might also affect individuals’ choices regarding their lifestyles, lead to the reconstruction of social institutions, and influence the distribution of public resources. In this sense, educating our students to understand and respond to the threats of such risks should be central to the goal of schooling. Ironically, as an educator, I will argue later that the current approach to schooling not only disregards the problem of global risks, but is itself an accomplice in their creation. This is not to say that we should attribute the split phenomenon to teachers. In fact, as far as I am aware, many educators are making efforts to improve the educational system to meet certain social expectations. However, the problem is that, as Taylor (2004) suggests, underlying these social expectations, there are always deeper normative notions and images. And if these notions, images and expectations lead to the seriously unintentional consequences of social practices, as educators, one of our responsibilities should be to create and re-imagine the possibility of social transformation for a better society (Huang 2012a).

2. The risk society and the accomplice of the education system
In this paper, the discussion will begin with the works of Ulrich Beck and Anthony Giddens, who have attempted to open up new sociological imaginations of the contemporary global risk society, which was not well described in previous sociological theories (Ekberg 2007; Mythen 2005).

An interlinked process beyond nation-states
In order to highlight the difference from Enlightenment-based modernity (the first modernity), Beck (1999) and Giddens and Pierson (1998) term the risk society as “the second modernity,” which basically cannot be comprehended by the traditional conceptual framework of the nation-state. As Beck (1999: 1-2, original emphasis) indicated:

All around the world, contemporary society is undergoing radical change that poses a
challenge to Enlightenment-based modernity…. I have for some time been working with a
distinction between first modernity and second modernity. The former term I use to
describe the modernity based on nation-state societies, where social relations, networks
and communities are essentially understood in a territorial sense. The collective patterns of
life, progress and controllability, full employment and exploitation of nature that were
typical of this first modernity have now been undermined by five interlinked processes:
globalization, individualization, gender revolution, underemployment and global risks.

This means that some phenomena in the risk society can no longer be interpreted
through the previous conceptual framework (i.e., the traditional concept of class), a
certain national position or a single process. Rather, globalization has to be
understood together with other social processes, such as individualization,
employment and risk.

The origin of the risks
The origin of the risks was mainly the pursuance of wealth through scientific
modernity, pursuing wealth was the primary goal of most people because they lived in
a society of scarcity. Human beings used their techno-scientific or expert knowledge
to control, exploit, and utilize Nature and build an ordered social environment.
Although the usage of this knowledge was successful in creating wealth, its dark side
also gradually emerged. For example, along with the development of the global
financial system and information technology come unintentional consequences such
as the financial crises of 1997 and 2008. Without the utilization of techno-scientific
knowledge in the financial market, the occurrence of such financial crises would have
been impossible. For the same reason, the usage of techno-scientific knowledge also
resulted in the different forms of risk in the global society (Beck 1999).

Another feature of techno-scientific expert knowledge is its stance on positivism,
which tends to exclude different forms of knowledge, ways of knowing, and
subject-experiences (such as moral and aesthetic experiences) from its production of
knowledge (Giddens 1991, 1994). Hence, anything that does not meet the standards of
positivism is excluded from the consideration of modern institutions, such as personal
meanings, local values, and cultural differences. The scientific rationale becomes the
sole language in social (re)construction, a phenomenon termed as ‘the monopoly of
science’ (Beck 1999). In fact, techno-scientific knowledge is naturally the cultural
tool, which means that it always implies a certain cultural stance (Ihde 1990). Thus,
when expert knowledge is transferred from one group to another, it necessarily
engenders culture and power conflicts between the two groups (Huang in press).
However, since modern society is constructed on the base of techno-scientific
knowledge, and these conflicts tend to be excluded from scientific monopoly, the process of social practices would be restricted in the face of these conflicts, differences and challenges when expanded from the West to the global society (Huang 2010).

Beck (1992, 1999) and Giddens (1991, 1994) also indicated that the ‘division of labour in experts’ is another factor leading to the emergence of global risks. When expert knowledge is highly differentiated and utilized in modern society, experts are only familiar with the knowledge in one certain area. As such, ‘no one is an expert, particularly not the experts’ (Beck 1999: 59). However, in reality, Nature and human society work systematically and holistically, and cannot be divided into separate areas of knowledge. Accordingly, when people use techno-scientific knowledge to control Nature and society, it leads to the erratic and runaway character of modernity.

**The institutional structure and neoliberalism**

However, the risk society cannot be understood without its institutional structure. Beck and Lau (2005) suggested that the risk society is a transformation of the basic institution of modernity. For example, neoliberal capitalism will mainly lead to economic crisis, while industrialism will mainly lead to ecological crisis (Giddens 1990). Moreover, Giddens (1990) indicated that modern institutions in Western countries are built on the foundations of the aforementioned expert systems, for example, economic, psychological and sociological knowledge systems. Along with the processes of modernization and globalization, the global risks, the unintentional consequences of modern expert systems, have also expanded wildly throughout the world (Giddens and Pierson 1998). This is one of the reasons why Beck (2000) declared that the risk society is beyond the scope of national territory and has interlinked relationships with globalization.

Among these modern institutions, *neoliberal-capitalism* is the most powerful and dominant institution in the world today (Beck and Willms 2004; Hutton and Giddens 2001). Although capitalism has had a continuity of existence for two centuries, we have been encountering a new form of neoliberalism since the collapse of the Soviet Union (Hutton and Giddens 2001). There has never been a globalized capitalist economy before, and it is bound up with the advance of science and technology. Thus, Hutton and Giddens (2001) indicated that capitalism without communism is quite a different animal from before, and we do not know as yet just how it works.

Accompanying the development of neoliberal capitalism, many high-consequence risks become more aggravated than before, for example, genetic pollution (Shiva 2001), ecological decay (Beck 1999), the greenhouse effect (Giddens 2009), the financial meltdown (Castells 2001) and social inequality (Faux and Mishel 2001).
The development of an individualized society
Another important issue of the risk society is the process of an individualized society. For Beck, an individualized society is the representation of an institutionalized individualism. Unlike the traditional life before the 1950s, the design of modern political and economic institutions has shifted the focus from people’s position in the family and communities to the individual him/herself (Beck 2009). Especially when most people are educated, individuals are relatively freed from the routines of social traditions. To some extent, it also means that, in many aspects of their life, individuals have no choice but to make choices, because there are no longer certain conventions which can frame their lives (Beck and Willms 2004; Giddens 1994). This process then leads to both positive and negative consequences in the risk society. The positive aspect is that people’s self-reflexivity is raised because there is relatively little reference for them to decide in which direction they should go. This is about the possibilities of educational change that I will discuss later. Here, I will focus only on the negative aspect of individualization.

For Beck (1999), when people are freed from the limitations of traditional society, it also means that they are freed from taking responsibility for ‘others.’ This is because, since everyone is free, they must take responsibility for their choices, including their failures. This social logic is further deepened in the neoliberal world. As Bauman (2001) indicated, the neoliberal world is also a consumer society, where the market provides a great quantity of goods which consumers can use to design their lives. However, ‘the rise of the consumer is the fall of the citizen’ (Bauman and Tester, 2001: 114). For those who are able to consume what they want, they can solve any problem they face through consuming rather than through communication and negotiation in the public sphere (Sulkunen 2009). For example, rich people do not have to deal with the problem of the poor, thieves or beggars. They can just buy and move to a new house in a richer and safer community. In other words, the individualized society is a concretized social institution of individualism derived from western culture (Huang 2010; Beck and Willms 2004; Giddens 1991). On the negative side, however, it separates the self from other selves and from the world in which one lives. Therefore, Bhaskar (2002) concluded that the modern concept of ‘self’ is rather egocentric.

The possibility of social transformation in the risk society
Although the risk society creates many risks, it also provides possible ways to overcome those risks. When facing the emergence of risks, people are more aware of the limitations of scientific technology (Beck 1992, 2009; Giddens 1994, 2009). Thus,
science’s monopoly on rationality is destroyed and individuals are forced to make new 
choices (Ekberg 2007). Questions related to morality and existential anxiety such as 
‘what should I do?’, ‘how do we wish to live?’, ‘what is the human quality of 
humankind?’ and ‘what is the natural quality of nature?’ are again becoming 
important issues in people’s lives in the risk society (Beck 1992; Giddens 1991). 
Hence, Beck (1994) and Giddens (1994) have suggested that the ‘second modernity’ 
is the ‘reflexive modernity.’

More importantly, Beck (1992) and Giddens (1991, 1994) indicated that people’s 
reflexivity will become the main force of social change. Since science’s monopoly on 
rationality has been destroyed, scientific discourse is no longer the only reference for 
social decision making. Any use of scientific knowledge should be opened up for 
public debate. In this situation, what was excluded from scientific discourse before 
now has a voice in the public forum. For example, we can see in the mass media that 
many debates and alternatives quickly emerge after any global crisis, such as the 2008 
Thus, Beck and Willms (2004) declared that although neoliberalism is still dominant 
and powerful in this world, different ideologies have gained space in public debates 
because of the appearance of global risks. Beck (1999, 2009) then proposed the 
concept of unawareness. Unlike the emphasis of scientific technology and expert 
knowledge on what is known, ‘unawareness’ pays attention to the effect of 
non-knowing. The risks, the unintended consequences, ‘open an expanded and more 
complex game involving various forms and constructions not just of knowledge, but 
also of unawareness’ (Beck 1999: 110). In order to expand what we are unaware of, 
Beck (1992) suggested that social rationality should replace the monopoly of 
scientific rationality. Similarly, Giddens (2000) also proposed that we should 
democratize scientific knowledge, making it an issue for public debate. Therefore, in 
such social conditions, people’s moral reflexivity becomes an important and new 
force for social change. Beck and Beck-Gernsheim (2002: 44) stated that:

…concern with the question of who I am and what I want, or with shopping and what’s on the 
menu – leads to a different kind of definition of the political. At key moments of a person’s 
biography, for example, it becomes necessary to discuss and agree on matters connected with work 
and life (who will do the washing-up, change the baby’s nappy or give up their career), as well as on 
policies to do with transport, labour, technology or any of the other everyday issues of a risk-filled 
civilization.

Hence, they use the term ‘life politics’ (Giddens 1991) and ‘sub-politics’ (Beck 
1994) to explain the relationship between individuals’ reflexivity and social 
transitions. Giddens (1991: 214) defined life politics as the ‘politics of a reflexively
mobilised order’ and as concerning ‘political issues which flow from processes of self-actualisation where processes of self-realisation influence global strategies’. Thus, reflexivity in the risk society is also ‘institutional reflexivity’ because individuals’ reflexivity will be re-embedded into the global institutions and gradually change them.

3. The education system: accomplice and gaps

**An accomplice in the creation of risks**

As a part of the public service and an institution in the state bureaucracy, the education system (especially the initiation and implementation of educational policy and related allocative resources) fundamentally services the intentions of the public and the state. But to understand the practice of the education system, we should also consider the global context beyond the education system. As mentioned, neoliberalism is the most dominant ideology driving the current global society. Such a context has created the pressure of competition among states and inspired the emergence of ‘human capital theory’ in which people tend to believe that higher levels of education quality can increase growth rates of national income or GDP (Hanushek and Kimko 2000; Heyneman 2004; Jamison et al. 2007; Kumar and Hill 2009; Ramirez et al. 2006). To elevate the competition and efficiency of the education system, privatization, marketization and performativity have become the main principles of education reform, and *accountability* has become the main approach to governance (Huang 2012a; Giroux 2005; Hargreaves 2000). Usually, central government sets up standards of student achievement in each academic subject and examines the accountability of schools through national testing.

Aligned with the development of the neoliberalized education system and human capital theory, the techno-science subjects have become the most emphasized curricula because they are central to the development of world economics (Apple 2004; Drori et al. 2003; Meyer and Kamens 1992). However, there are two subsidiary features of the science-centered curriculum that we should be aware of. Firstly, the standards of academic subjects imply a subject-centered concept of the curriculum, where different subject areas are regarded as independent of each other and, secondly, the emphasis on science curricula tends to maintain the higher status of science and aggravate the gap between science and non-science knowledge. From the angle of the risk society, these two features will encourage the development of global risks because they are coherent with the differentiation and division of labor in the global society and strengthen the monopoly of science language. In addition, Giddens (1990, 1994) also indicated that the worship of science in school curricula also creates the
‘hidden curriculum,’ which prevents students from being aware that scientific knowledge is always dynamic and that there are always conflicts among different scientific groups.

Furthermore, the traditional role of the ‘state’ in the education system might also be problematic in the risk society. Although neoliberalism works on a global scale, it highlights the competition among states. Again, such a competitive sense forces policy makers to not only engage in the contest of world curriculum reform, but to consolidate the irrational national identity of the public (Drori et al. 2003; Meyer and Kamens 1992). As Beck (2009) indicated, the education system tends to be geared towards national integration and homogeneity, which is not advantageous to developing a sense of cosmopolitanism in this global village.

On an individual level, the competition-orientated value also makes individuals regard others as potential competitors, because through the power of the mass media people are aware of the threat of unemployment in this neoliberal world (Huang 2012a; Bauman 1999; Fairclough 2006). This is also the reason why Beck (1999) emphasizes the close relationship among the risk society, individualism, globalization and unemployment. This sense of competition leads to two consequences. Firstly, it frames the public’s social imagination and intensifies the neoliberal education policy, because policy makers in governments are fundamentally the representatives of the people through democratic elections, and thus policy intention has to be aligned with the expectations of the public social imagination (Levin 2008; Mitchell and Boyd 2001; Westbury 2008). Secondly, when educational goals are narrowed down to the competition between individuals, schools become the very place to cultivate the competitive sense in students’ minds, thus deepening the ideology of egocentrism (Huang 2012b).

In sum, current developments in educational systems reflect the public’s social imagination of this neoliberal world. Unfortunately, their imagination has also constructed the education system to become an accomplice in producing the global risks in modern society.

The three gaps between traditional education and reflexive education

To escape the role of accomplice, I suggest that educators need to rethink the possibility of education. My assertion is that we should have a reflexive form of education, where schooling plays the central role in promoting reflexivity on global risks and bringing about social transformations in the risk society. It is termed ‘reflexive risk-education’ because the concept reflexivity, as previously mentioned, is not only the convergence of expert knowledge, social (re)construction and self-identity, but also an opportunity for promoting human beings’ awareness of the
limitations of modern institutions, social problems and the meaning of existence. Based on previous discussions, reflexive risk-education contains at least three features. Firstly, the goal of reflexive education should not be limited to the interests of nation-state or individuals. Secondly, reflexive education starts the analysis on risk events to capture the unawareness of modernity and then find out possible solutions with other perspectives. Thirdly, in this process students are inspired to reflect on whom they really want to be and make new choices in their life. Here, I will attempt to analyze the gaps between traditional education and reflexive risk-education in order to identify possible strategies for developing reflexive risk-education.

**Gap 1: The experiential gap between individuals and the global society.** As a result of the competition and unemployment in this neoliberal world, the current education system has become highly individualized and egocentric. Individuals have to study and work for themselves and have been freed from having responsibility for others. The concern of individual students is to attain high scores on national tests for their own benefit, not for the benefit of others or for society as a whole. In an empirical study, it was found that students have indeed become more ego-centered in this neoliberal world because they are concerned more about themselves than others, the natural environment or society (Huang 2012b). Furthermore, the emphasis on national identity in national curricula also tends to interpret the risks from the perspective of national territory. However, the emergence of risks is the unintentional consequence of the development of modernization and globalization. Local events and personal choices are usually interlinked with the operations of the global society, a phenomenon termed as ‘detrimentalization’ by Giddens (1990). For example, the negotiation of carbon emissions trading is based on the unit of the governmental body, thus allowing the richer countries to legally transmit their responsibility to poorer countries, but neglecting the fact that both poorer and richer countries are the receivers of climate change. Hence, what is more important is not what really happens, but how we frame and interpret the phenomena around us. When students’ reflexivity is self-referential and framed within national boundaries, they lose the insight to integrate and understand the global risks.

Moreover, as human beings, the ‘body’ seems to be a critical boundary and reference for individual experience and judgment. According to studies using brain-fMRI, it has been found that people are more concerned about individual risks (e.g., health risks) than collective crises (e.g., financial and environmental crises). People are less concerned about collective risks because they are temporal-delayed, spatially distant, and occurring to others (Gattig and Hendrickx 2007; Hendrickx and Nicolaij 2004). It is hence reasonable to infer that such an innate trait of human beings
would be encouraged in an individualized society. Thus, both human nature (body experience) and social structure (national territory and institutionalized individualism) create barriers preventing human beings from capturing the interlinked relationship between personal life and global risks. This situation is further exacerbated when the education system is limited by neoliberal social imagination. Hence, a possible way to bridge the gap is to provide a better kind of social imagination by which students can interpret and connect their personal experiences and the global risks beyond the frames of self-reference and nation-territory.

**Gap 2: The public-sphere gap between school and society.** When transmitting subject knowledge and reaching the standards of national tests become the primary goals of education, the scope and responsibility of schools tend to be reduced. However, a main public responsibility of schools should be the (re)construction of the public sphere, especially considering the fact that social transformation in the risk society is driven by *social rationality* and *life politics*. The emergence of risk is just the starting point for the public’s recognition of the limitations of social practices. To reduce these risks, the public needs to have the competency to think beyond scientific knowing and to reflect on who they are and what they really need. This means that, besides transmitting scientific knowledge, students also need to learn to deal with risk issues with complex and multiple values and knowledge, which reflect the various values of different social groups. It is certain that the subject-centered and science-focused approach to education would restrict students’ development of that competency. We need to renew our concept of traditional pedagogy and encourage students to step outside of the classroom. Here, the concept of *unawareness* suggested by Beck might thus be suitable for future education.

For example, in the name of ‘intellectual property rights,’ global trade allows biotechnology companies in advanced countries to apply patents which originated from local knowledge in developing countries (Shiva 1997, 2001). In this process, only the western techno-scientific knowledge and its cultural assumption of knowledge are considered. In fact, the local culture in some developing countries tends to assume that knowledge is ‘public’ (because it was developed historically within local communities) as I will discuss later. Western cultures are unaware of these local cultures and values. However, without an equal process of dialogue in the public sphere, social decisions will be dominated by western values and cultures, while the local ones (which the West is unaware of) will be excluded. In other words, the complex issue of free trade and intellectual property rights also implies an unjust relationship between countries, and differences in local values and cultures.

Thus, no expert can foresee what will happen when techno-scientific knowledge is
applied to social reality, because their knowledge is usually developed from certain cultures and values. Only after social rationality appears in the public sphere can the public expand its horizons. In this sense, efficient knowledge is not created in a laboratory, but in the social field where the knowledge is utilized and discussed. However, in schools, the complexity of this issue is reduced to transmitting certain techno-scientific knowledge and subjects. The reality of the social practices of that knowledge is always excluded from schooling. But, for reflexive education, I believe that the reality of social practices can open our minds to acknowledging the limitations of expert knowledge and the importance of social rationality. Meanwhile, if teachers can provide more space for students to discuss these issues, it would also cultivate students’ competency to make more informed judgments on risk issues that happen around them. In this learning process, the traditional classroom will be conceptualized as the public sphere, and there will be opportunities for expert knowledge to be expanded or revised to fit the contexts of both global and local society. This would be beneficial not only for the sustainable development of expert knowledge but also for the global society.

**Gap 3: The epistemological/cultural gap between eastern/non-western and western cultures.** As mentioned above, underlying any techno-scientific knowledge, there is always implied a certain cultural stance. Drori et al. (2003) remind us that the implementation of science-oriented curricula in this global world is a ‘cultural issue’ rather than an ‘economic issue’, because these scientific subjects are derived from western culture but have now spread around the globe. In empirical studies, it is evidenced that western and non-western societies have different cultural tendencies, such as individualistic vs. collectivist self and, analytical vs. holistic thinking (Huang 2010, 2013; Nisbett 2003; Spring 2008). However, when western culture is adopted, not only do we take it as the guide for our thinking and actions, but also indigenous cultures are marginalized. Therefore, the dominance of western culture is highlighted as an ‘epistemological crisis’ (Cray 2006) and ‘epistemological violence’ (Dei and Doyle-Wood 2006). Nevertheless, I believe that the epistemological crisis is not just an abstract culture issue. In fact, this crisis might be disadvantageous for us in terms of facing the challenges in the risk society.

Underlying the practice of the risk society, three western cultural features are the basic assumptions: dualism, individualism and rationalism. These assumptions have a close relationship with the production of global risks (Huang 2010). Therefore, some eastern and other non-western cultures might help us to think and act beyond the cultural scope of western culture, because they are usually unknown to western culture. For example, unlike the individualism and analytical thinking in western
culture, in eastern culture the real self is *co-present* with others and Nature (Bhaskar 2002) and people tend to value the relationship between the object and its context (Masuda and Nisbett 2006). Unfortunately, it is also found that teachers have very little understanding of the differences between western and eastern cultures (Huang 2013). According to Giddens (1984), these local cultures take the form of practical consciousness, which is doable but usually not describable. Due to this limitation, it is almost impossible for teachers to perceive the alternatives and unawareness of western cultures.

Again, let us consider the case of intellectual property rights in the process of economic globalization to explain the problem of cultural difference. In the west, the culture of individualism and scientific reductionism supports the concept of private property and biotech intellectual property rights by highlighting certain people's contributions to the reorganization of partial genes (Shiva 1997). Biotech companies have the ownership of genetically modified genes, just because they declared that their bioengineering can control and predict the functions of these genes. Ironically, when the crops are planted in a natural environment, these companies declare that they are not responsible for the subsequent problems of biosafety, and thus farmers and consumers have to take responsibility themselves (Shiva 1997). However, in most non-western cultures, knowledge ownership is common and shared because it is historically accumulated in communities. For instance, the crops we use now evolved during human history throughout millennia of domestication. And, according to the holistic thinking in non-western cultures, crops are always a part of the ecology, which differs from the predictable environment in the laboratory. However, when western culture is packaged in the name of free trade, biotech companies legalize their ownership and make considerable amounts of money while exporting hidden risks to farmers, consumers and the natural environment. Hence, if educators want to analyze the reality of social practices of expert knowledge, an understanding of cultural differences is vital.

4. Towards reflexive risk-education: possible strategies to bridge these gaps
Undeniably, many educators have discussed the problems of neoliberalism in the educational arena. However, many of their discussions focus on the subsequent impacts on educational policies and practices within a certain national territory (Beech 2009). Further discussion of a new framework to (re)construct the education system within this global society is relatively limited. Thus, here I propose possible strategies developed under the concept *cosmopolitanism*. Although cosmopolitanism is still an ongoing developing concept, a main common view is that, as Beck and Sznaider (2006: 3) suggest, in social reality the dualities of the global and the local,
the national and the international, us and them, have dissolved and merged together into new forms that require conceptual and empirical analysis. In other words, we are at a turning point in human history. Educators should not be limited to the implicit framework of national territory and the discourse of neoliberalism. We should encourage our students to reflexively create new social imaginations to promote social transformation in the risk society. Three strategies based on the previous discussions are proposed.

**Strategy 1: Developing an integrated curriculum through ‘critical glocal pedagogy’**.

As mentioned above, a subject-centered curriculum will encourage the division of labor and hence increase the occurrence of global risks. Thus, at least a part of the curriculum should become an integration of the natural sciences, the humanities and the social sciences. Such an integrated curriculum would basically focuses on raising students’ critical consciousness of certain issues of global risk. More concretely, in order to bridge the gaps between traditional and reflexive education, four dimensions might need to be contained as far as possible: global inequality, local vulnerability, cultural differences and personal reflexivity.

Because of the high-consequence of global risks, people on earth constitute a ‘community of fate’ (Beck 2009). However, as explained above, the experience gap makes people focus more on themselves and discount the consequences of these distant and uncertain global risks. Thus, a sense of the community of fate is not enough to promote the concept of cosmopolitanism. One possible way to bridge the experience gap is to highlight the situation of global inequality among nations (Beck 1999a, 1999b, 2009) and then connect it with personal reflexivity. As mentioned in the cases of carbon emissions trading and genetically modified foods, a large part of the risks are exported to developing countries under the neoliberal discourse of free trade. In Vandermeer and Perfecto’s (2005) studies, they also found that the destruction of rain forests is rather more political than scientists and environmentalists originally thought. Global inequality always plays a significant role in global risks. Moreover, social inequality also refers to social vulnerability, because ‘the more marginal are the economic and political options, the more vulnerable is the particular group or population’ (Beck 2009: 178). Not everyone is exposed to the same extent of risks. Hence, when rich people/countries export risks to poor people/countries, they tend to discount the negative consequences of their social practices because these risks are temporal-delayed and spatially-distant to them. Thus, for different local contexts, educators need to ask the next question: who is exposed to what dangers in certain local contexts? (Beck 2009). Through the investigation of this question in class, students would become aware of the fact that personal fates are inseparable
under global economics. So, food security and choosing organic food is not just about
health risks to individuals, but is also about our social position relative to the global
and local societies.

In turn, students should develop their competencies of dialogue and interpretation
of the complex relationship between global and local society. To do that, they have to
discriminate the different cultural assumptions hidden in global activities. As part of
the public sphere, curriculum space should be expanded and opened up for dialogue
and interpretation, where local values and epistemologies are given their rightful place
and scientific knowledge is no longer the monopoly of the public sphere. In this
process, students are encouraged to reflect on questions such as: ‘who are we?’ and
‘what do we want?’ and to made new choices and change their lifestyles according to
their reflexivity.

**Strategy 2: Assembling the social network through collaborations, such as with
NGOs.** However, educators also need to appreciate that reflexive risk-education is
difficult and ambivalent. It is difficult because neoliberal discourse still has strong
impacts on the social imagination of the public, and the current education system still
dominate educational practices. Although Beck believes that risk awareness will
promote people’s reflexivity, my study also found that their reflexivity is relatively
superficial. It is found that there is in fact a great deal of information about global
risks exposed in the mass media and in textbooks, and even in schools an increasing
number of teachers are supplying knowledge of these global risks to students (Huang
2012b). However, in most situations, students pay more attention to their test scores in
order to maintain their competitiveness in this individualized institution. Moreover,
teachers’ supplementation of risk information tends to be rather superficial, and
usually does not reach the level of moral reflexivity mentioned by Beck and Giddens.
It is also found that although most teachers regard the collective risks (e.g., financial
crises and climate change) as more serious, they prefer to present information about
individual (e.g., health risks) rather than collective risks. According to teachers, their
focus on individual risk is mainly because they feel that the collective risks are
beyond the control of individuals (Huang 2012b).

However, there are still teachers who show deeper moral reflexivity, adopt deeper
pedagogical methods to evoke students’ reflexivity, and attempt to build a strong
personality for students to make correct choices. More interestingly, it is found that
many of these teachers are members of NGOs which have been working to solve
global risks from the perspective of eastern cultures for a long period of time. These
teachers have also reported that, as members of NGOs, ‘you will find that you are not
alone and there is a group of people working together with you’ (Huang 2012b: 1191).
It is these key teachers’ experiences with NGOs that encourage their innovations. Actually, most NGOs have accumulated rich and integrated professional experience, local experience and related social resources. Relatively, most teachers are trained as subject experts and tend to be governed by the traditional education system. Thus, NGOs’ experiences would be helpful for teachers in overcoming their feeling of a lack of control, and in expanding their knowledge and practices of reflexive education.

In fact, Beck (1999a, 1999b, 2009) also mentions that NGOs reflect the powerful actors from below in global society and manage the global risks through local practices. For others, NGOs are the countervailing force to neoliberal globalization and can provide educators with more holistic, integrated, and multicultural curricula (Spring 2006; Touraine 2007). In sum, reflexive risk-education is difficult and ambivalent. Expecting most teachers and the public to be reflexive and participate in social transformation autonomously is unrealistic. A fundamental question is how school teachers can overcome their feeling of a lack of control. It seems that the best strategy at this stage might be to assemble more social networks (especially NGOs) into the practices of reflexive risk-education.

**Strategy 3: Creating new social imaginations through educational practice and research.** As mentioned, our social imagination tends to frame our thinking and practice (Taylor 2004). Therefore, the discourse and institutions in this neoliberal world (e.g., competition, accountability and unemployment) have direct impacts on educational practices. I believe that many people have become aware of the risks and limitations of this neoliberal world. However, most people have no alternatives. Thus, creating new social imaginations is critical for the new possibilities of educational and social transformation (Greene, 1995). In this sense, educational reform in the risk society by its very nature is also social reform. However, creating new social imaginations meanwhile implies a process of negotiation among different social contexts, values and cultures. Touraine (2007) also found that, although most NGOs share the common goal of countervailing the neoliberal globalization, it is not easy to analyze how this can be achieved within a systematic framework. In other words, the creation of new social imaginations is an ongoing process of reflexivity. Thus, as educators, we need to create opportunities for dialogue among global educational communities. Through the practice and research on reflexive education, we can create the learning experience of dialogues with differences, learn the successful experiences from below, and work out the possible vision of a new social imagination. These tasks are beyond the traditional framework of education and thus might create new issues of educational practice and research, for example, how local agents explain the phenomenon of glocal risks, what the differences between local culture and the
dominant western culture are, what happens in the process of reflexivity and how it constitutes the identities of local agents, and what the successful key factors of the collaboration between schools, teachers and NGOs are.

5. Concluding comments
Based on these discussions, here I will attempt to concretize some principles for the curriculum and pedagogy of reflexive risk-education. These principles can be classified to four stages as follows: Experiencing vulnerability, Revealing unawareness, Creating new social imagination, and Making new choices (ERCM). The ERCM model provides a referential for educators who have interest in reflexive risk-education.

- **Experiencing vulnerability**
  1. Collect related information of certain risk event
  2. Identify the local vulnerability in this event
  3. Develop experiential curriculum for student to experience local vulnerability

- **Revealing unawareness**
  1. Connect local vulnerability with global activity and inequality
  2. Analyze the relationship between risk events and the non-knowing of modern techno-scientific knowledge

- **Creating new social imagination**
  1. Create public sphere in class to include various voices (e.g., other culture views, related NGOs, local agents, other academic subjects)
  2. Image the possible practices for a better society beyond the frame of neoliberalism in different levels (personally, locally, and globally)

- **Making new choices**
  1. Discuss the (un)suitable lifestyles in our daily life
  2. Inspire students to do something personally and collectively for a better society, while initially teachers should focus on something that is more controllable for students to avoid the helpless feeling and assemble NGOs into students’ practices.

Of course, some educators have been devoted to related works of reflexive risk-education although they did not use this term. And in reality educators are situated in a neoliberalism-dominated world and their practices usually reflect their personal experiences, local contexts and social positions (e.g., power and class). Thus, researchers need more studies to explore and interpret these interlinked and complex works. Nevertheless, we should not forget that reconstructing new social imagination
is always central to reflexive risk-education, because it helps people to construct a systematic understanding and comparison between neoliberal world and desired future. In terms of Warner (2002), the nature of the public sphere is a kind of “social imagination,” meaning that the work of the public sphere is rooted in the self-understandings of its participants. Different understandings and interpretations of the public sphere would lead to different social practices. Hence, in its nature, reflexive risk-education is a kind of social reform.
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