

Teaching China's First Critical Futures Studies Courses: Insights and Issues

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Abstract

There is a common perception that Chinese students are proficient test takers, but less adept at critical thinking. There is conflicting evidence to support this claim. In this article, the author first briefly traces the development of critical and independent thinking in Chinese history and outlines the situation in Chinese education today. Secondly, he presents his personal experience of encouraging the development of Futures-oriented and critical thinking in a Chinese tertiary education setting, via the creation and teaching of China's first extended Critical Futures Studies courses. The criticality component of the program was modified specifically for the Chinese context. An ethnographic approach is taken in the latter part of this article as the author shares details of that curriculum, as well as successes and shortcomings gleaned from the experience. The purpose of this sharing is to assist other Critical Futures Studies educators in setting up Critical Futures Studies courses in China, or in similar environments where Futures thinking and critical thinking have not been emphasized within the culture and/or educational curricula. The article also posits suggestions on how to develop such programs and related critical thinking processes in broader school curricula. Finally, the author reflects upon his/her role as a critical futurist in China, using Inayatullah's (2018) Causal Layered Analysis.

Keywords

China, future, Futures Studies, critical thinking, politics, Chinese students, Chinese history, methods, Chinese education, liberalism, conservatism

“All heroes under the sun have fallen into my trap.”

Emperor Taizong (AD 598–649) admiring successful candidates of *keju* imperial examination system (Zhao, 2014).

“Building innovation in China requires a radical reform of education, encouraging creativity and critical thinking. It is less a funding issue and more one of creating an environment. The academic community needs to firmly censure

plagiarism amongst both professors and students. The cult of hierarchy in science needs to be

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replaced by a desire for truth. Quality must be recognized as more important than quantity. The priorities are a vibrant civil society and the cultivation of critical thought. We need China to become more innovative, and there is no reason whatsoever why China cannot develop a more substantial innovative culture.” (Beardson, 2014)

Building sustainable futures is not simply about governments implementing progressive policies from above. The ideal futures of China and the world will require informed, intelligent, and wise citizenry. Those citizens will need to be aware of the issues of sustainability, and they will ideally have the capacity to act wisely as individuals and as part of their local, national, and global societies. Critical thinking skills can and should be a foundational aspect of that ideal future. Further, it is almost certain that the future will unfold within the context of a hyper-competitive, dynamic and uncertain world. Therefore, it will not be good enough for educational institutions to produce the kinds of graduates that have historically emerged from the “factory” model of education (Beare and Slaughter 1993; Inayatullah & Na, 2018; Pink, 2005; Zhao, 2014). Chinese and non-Chinese schools which produce a more dynamic and intelligent body of graduates will likely have a competitive edge in the education marketplace. Thus, a diversity of stakeholders may potentially benefit from a shift toward smarter educational futures.

Yet a 2016 Duke University report indicated that a lack of essential capacity in critical thinking skills is the primary cause for Chinese student’s poor scores in the SAT (Hu, 2016). It is widely believed, both within China and abroad, that Chinese students and teachers in the Chinese education system are heavily focused on their final test scores, and not problem-solving, criticality, or a liberal education (Tyner, 2017; Qiang, 2015; Zhao, 2014).

Typical of this view is the claim that Chinese students are proficient academicians yet are without a concurrent ability in critical thinking. As outlined below, this situation must be considered within its context: that Chinese civilization has a long history of social,

cultural, and political pressures acting against the inculcation of institutionalized critical thinking (Zhao, 2014).

Nonetheless, there has been a push in more recent times from at least some official circles to address this problem. Using the example of the author’s recent experience of teaching mainland China’s first Critical Futures Studies courses, this paper examines the issue of critical thinking (including criticality) in Chinese education. It makes some suggestions as to how upper secondary and tertiary level educational institutions within China might go about introducing Critical Futures thinking and thus improving the broader cognitive and introspective abilities of Chinese students.

A key distinction is that the “criticality” in Critical Futures Studies is not precisely the same thing as “critical” thinking in the general sense of the term. Scriven and Paul (1987) posit the following definition.

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness... It entails the examination of those structures or elements of thought implicit in all reasoning: purpose, problem, or question-at-issue; assumptions; concepts; empirical grounding; reasoning leading to conclusions; implications and consequences; objections from alternative viewpoints; and frame of reference. Critical thinking (includes) scientific thinking, mathematical thinking, historical thinking, anthropological thinking, economic thinking, moral thinking, and philosophical thinking (Scriven & Paul, quoted in *Defining critical thinking*, 2019).

Critical Futures Studies encourages or at least potentially facilitates critical thinking, but the prime focus in the Futures context is upon

deconstructing the mediation of power and privilege within specific futures, and positing alternative futures (Inayatullah, 2021). The article below describes educational programs which have attempted to apply both critical thinking and criticality.

This paper consists of three parts. In the first, it briefly outlines the current and broader historical situation regarding Chinese students and broader citizenry's critical thinking skills. In part two (presented in ethnographic form), the experience of the author in bringing critical thinking skills to students in one mainland Chinese school will be introduced. The focus will be upon the Critical Futures Studies courses taught recently at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, Zhuhai, China. Part three identifies possible curriculum approaches for introducing enhanced cognitive skills into the culture of Chinese upper secondary and tertiary institutions. This includes precise pedagogical tools and methods and also identifies specific successes and problems.

A Brief Account of Critical Thinking in Chinese Education, Now and Through History

Now...

As stated, a common perception is that Chinese students tend to be excellent memorizers and test-takers, but less adept at critical thinking. A recent Duke University report indicated that a lack of essential capacity in critical thinking skills is the primary cause for Chinese student's poor scores in the SAT (Hu, 2016). The causes of this problem across Asia in general include that the education systems tend to be heavily test-oriented, teacher-centered, and driven by pressure from society (Mahbubani, 2009; Qiang, 2015; Zhao, 2014).

The Chinese education system in the People's Republic has not traditionally been well-equipped to develop refined thinking skills. Critical thinking has not been a prime

educational value of the *gaokao*,¹ for example (Zhao, 2014). Further, the teachers within China are a product of that same system, which has a heavy emphasis upon rote-learning. Finally, it is often observed that the very ideal of critical thinking is not compatible with the hierarchical structure of China's Communist government, nor of Confucian societies in general (Zhao, 2014).

Yet there are some contradictions. A recent Stanford University study indicated that Chinese freshmen in engineering and computer science are ahead of their western peers, but then fall behind in relative terms at tertiary level (Hernandez, 2016). Further, academic ability, in general, is very high amongst Chinese and Asian students. If we take as the standard measure the PISA test - which assesses the academic abilities of fifteen-year-olds in math, reading, and science across the globe—it can be seen that Chinese and Asian students have dominated in recent years. Shanghai topped the 2009 and 2012 PISA test standings, while Hong Kong finished second in 2016 (Zha, 2015).

However, China's success in the PISA tends to be in math and science. In 2016,² it did not finish in the top twenty in reading, which notably requires a greater degree of ability to decode and critique information. Still, given that Singapore, South Korea, and Japan all finished in the top eight (Coughlan, 2016) this suggests that it is not the innate reading or analytical ability of Asian students that is the problem.

Therefore, while there are various disputations at the secondary level, it appears to be true that Chinese tertiary students (at home and abroad) are relatively lacking in critical thinking abilities. This lack of progress in thinking skills amongst Chinese university students most likely reflects the pedagogical approach at Chinese universities, which tends to be repetitive, teacher-centered, and uninspiring. The problem may be compounded by a decrease in student motivation after completing the high-pressure *gaokao* (Hernandez, 2016). Thus, there is a need for both mainstream and Chinese-foreign tertiary institutions in China to assist their students to develop critical thinking skills.

Through history...

The roots of the current Chinese education system go far back in time.

Critical thinking is most often equated with the western liberal tradition, dating back as far as the ancient Greeks like Aristotle, Parmenides, and especially with the Socratic Method. The development of scholasticism, which dominated Christian theology from about the year 1000 until 1500 was also crucial. *Scholastica disputatio* subjected faith to reason via questioning and evidence, with the latter two cognitive processes seen as emanating from the mind of God. Scholasticism formed the foundation of much western schooling and university education up till the twentieth century (Rohmann, 1999). Copernicus, Galileo, Tycho Brahe, Kepler, and Newton were all products of the procrustean and scholastic universities of Europe (Huff, 2003). In turn, the logical and analytical scope of the ancient Greeks is often thought to underpin the Scientific Revolution—the so-called Enlightenment—beginning around the seventeenth century (Tarnas, 2000).

Chinese and Asian cultures have tended to be more collective in nature, with less focus upon individualism and independent thinking (Fairbank & Goldman, 2006; Nisbett, 2003).

Notably, the Eastern tradition, “enlightenment” refers not to the development of the so-called “rational” cognitive functions, but to latent psycho-spiritual propensities which are in the Eastern tradition believed to reside within the human psyche (Tarnas, 2000; Wilber, 2001). Daoist and Buddhist thought are deeply introspective, concerned not so much with criticality as with insight into the deeper structures of thought, and cultivating the “right relationship” with the world and with personal experience (Rainbeau, 2018). Goddard’s 1919 translation of chapter 47 of the *Dao de Ching* suggests that inner knowing is more important than examining nature empirically.

Not going out of the door I have knowledge of the world.

Not peeping through the window I perceive heaven’s Dao.

The more one wanders to a distance the less he knows.

Therefore, the wise man does not wander about but he understands... (Goddard, 2014).

The “rational” cognitive limits of the current Chinese education system are thus arguably a legacy of China’s ancient and more modern history.

There have been periods of Chinese history where freedom of thought and expression were more widely accepted. Perhaps most notable of these was the time of the Hundred Schools of Thought (500–221 BC) which spanned the Spring and Autumn period and the Warring States period. This is sometimes known as the golden age of Chinese philosophy. Many ideas and philosophies were discussed, including Confucianism, Mohism, Daoism, Buddhism, and Legalism. However, as that period came to an end with the beginning of the Qin dynasty, the more authoritarian edict of Legalism became entrenched. Legalism became entwined with the Confucian ideals of hierarchy and familial piety. The more permissive and passivist Mohism and Daoism became less influential (Fairbank and Goldman, 2006; Grayling, 2019).

The development of the *keju* system of imperial examinations has been of great influence in the development of China’s society and education system. Yang Jian, Emperor Wen of the Sui dynasty (AD 581–618) initiated the *keju*. This valued conformity and stability over individual freedom of expression (Zhao, 2014). Scholar-officials became part of the educated class, or *xiucais*. Such minds were shaped by the Confucian system. Fairbank and Goldman (2006) note that:

Under the empire, men of letters had come to be almost universally examination candidates and therefore classicists and conservatives. Most of the great achievements of Chinese literature had come within this framework of acceptance of the

social order and central authority. No monastic sanctuaries, no clash of sectarian faiths, no division between church and state were allowed, as in Europe, to spawn diversity (Fairbank & Goldman, 2006, p 360).

Zhao (2014) argues that this system was an attempt to bring peace and stability via conformity when Yang Jian united China after the chaotic warring states period. The *keju* scholars had impressive memories and knew much about the past, yet it appears that they were largely unable (or unwilling) to envisage alternative futures. That social/political system rewarded obedience, compliance, and homogenous thinking. It became a system of social control which defended the status quo and perpetuated state power. Later emperors adopted the same system, so successful was it at controlling the people. It remained in place till the final days of the Qing dynasty (Zhao, 2014).

After the fall of the Qing dynasty there was a hiatus of about half a century, and then the *gaokao* system was reinstated in 1977 after the death of Mao. Since then, at least some educational authorities have shown a gradual willingness to listen to criticisms that it is too rigid, and so subsequent changes have been made. In 2014 there was a move to encourage a more rounded education and learning outside the classroom (China Daily, 1917). This has culminated in the most recent 2016 push for improved thinking skills (China culture, 2017).

In 2017 and 2018, President Xi Jinping made announcements which prioritized education reform, including the acceleration of “modernization,” “social progress,” and “national innovation capability” (How China is shaping, 2020). Further, there remains an overt push toward making China a leader in innovation, science, and technology by mid-century. This includes guidelines sent to schools which implore teachers and administrators to “nurture and protect student’s curiosity... imagination” and creativity (Giolzetti, 2020; How China is shaping, 2020).

Yet there is a countering conservatism which contradicts the above “liberalism,” with a wide-ranging initiative under Xi Jinping to

restructure Chinese education along preferred ideological lines. According to *Foreign Policy*, there are concerns about the active discouragement of creativity and innovation, including teachers being banned from using foreign texts or referencing outside ideas. President Xi has stressed five vital qualities: morality, intellect, physical ability, aesthetics, and work ethic (Giolzetti, 2020).

The focus upon physical labor appears to invoke the spirit of Maoism. On 26 March, 2020, China’s State Council and the Central Committee announced joint guidelines focused upon “labor education.” This has called for more manual labor activities in curricula. The purpose is apparently to instill a greater physical discipline and appreciation for hard work in youth, who are perceived by some in authority to be not only more self-centered, but less physically strong, self-disciplined, and “appreciative” than previous generations (Giolzetti, 2020).

Foreign Policy quotes an anonymous English lecturer at a Fujian province university who believes that critical thinking is not a priority in today’s China.

Year on year, they’ve become more indoctrinated... It’s become more difficult to get across the idea that you can think critically about something or, at the very least, look at something with a different perspective (Giolzetti, 2020).

A single anonymous quote is not definitive evidence, yet it does appear that Chinese educational institutions are facing two opposing forces: a more centrifugal and liberal thrust pushing them toward more free and critical thought, along with creativity and innovation; while simultaneously being under the centrifugal pressure of conservative ideals. In seeming contradiction, both of these movements have been encouraged by Xi Jinping.

Can Chinese education and the Chinese society transform itself into a more “progressive” future under such a self-contradiction? My experience in teaching Critical Futures Studies in China over the past 3 years offers some insights as to what the opportunities and challenges might be.

Why Teach Critical Thinking to Chinese Students?

There are many strong reasons to make critical thinking (including criticality) a broader component for Chinese secondary and tertiary institutions.

In 2016, it was announced by the Chinese government that the *gaokao* would be changed to accommodate more creative and critical thinking (Hu, 2016). For example, Chen Quansheng, adviser at the State Council has recently referred to a push for “innovative talent” which requires “a more open environment for students to think” (China Culture, 2017). The *gaokao* is also introducing project-based learning and emphasizing learning outside the classroom (Beardson, 2014). The ideal is that educational institutions should not only think in terms of classical teacher-centered approaches but also encourage independent, problem-based learning. An opportunity therefore exists for open-minded and innovative educational institutions within China to develop progressive curriculum, including critical thinking skills. Yet as has been noted, this has to be done while acknowledging the opposing requirements of conservatism.

Producing students with well-rounded cognitive abilities is simply good for business, and in particular for those schools producing the vast numbers of Chinese students studying abroad—around 660,000 in 2018 (Textor, 2020). Foreign universities are keen to receive Chinese students with improved learning skills, having seen that they are often lacking in such abilities (Swain, 2014). Therefore, any given Chinese educational institution stands to develop an enhanced reputation if its graduates are intellectually proactive and good problem-solvers. If a school is able to produce cognitively-nimble students who stand in contradiction to the stereotype of Chinese students mentioned above, their graduates will be attractive for foreign partner universities, and in theory will be better adapted to the western system.

Another advantage in enhancing the cognitive skills of Chinese graduates is that many wealthy parents are rejecting the local (Chinese) system. Some are opting out of the

gaokao and/or Chinese tertiary education systems entirely, preferring to send their students abroad (Tyner, 2017). Overseas schools and local Chinese-foreign partnerships are benefiting from this trend. There are many such programs in the PRC. They operate within public schools and at the tertiary level.³ Such institutions often require high enrollment fees, yet many wealthy families are willing to pay for them. The programs typically feature an English focus, and are designed to prepare students for tertiary education in the United States, Canada, Australia, or Europe. It is notable at the secondary level that over ten percent of the students in China’s most affluent provinces are now enrolling in non-*gaokao* programs. Indeed, in some areas, local governments have enforced regulations to limit the popularity of the programs (Tyner, 2017). Many parents concerned about the Chinese mainstream education system now find schools with an innovative and progressive curriculum an attractive option to enroll their children, if that is financially viable for them.

As Tyner (2017) points out, these experimental educational programs are set to continue.⁴ Beyond being attractive to students and their parents, it is reasonable to assume that innovative schools will influence curricula, pedagogy, and the overall character of education in the PRC for the foreseeable future, even despite wider conservative forces. New and progressive institutions with flexible curricula are in a strong position to be pacesetters in developing progressive education.

Further, developing future citizens who are both wise and smart will make for a more sustainable future for China—and for the world (for many of those students may choose to live part of their lives overseas, after graduation).

Finally, it has become increasingly accepted globally that tertiary education institutions need to develop broad entrepreneurial skills in their graduates. This is not only because of the development of the internet and Information Technology in general but also because of the emerging gig economy, and the possible disappearance of the idea of “getting a stable job”

(Jenner, 2013; Priestly, 2012). The capacity for independent thinking and creativity, along with refined social skills and intelligent risk-taking, can be seen as means toward facilitating entrepreneurial skills.

Thus, the recent transformation of China's education system, although in its early stages, may potentially be driven not only from those at the top (government) but can also be influenced by those within the system who have the foresight to perceive the opportunities, and who are willing to innovate and take intelligent risks within the (often strict) bounds of the system. The question then becomes, how far can one push the boundaries before there is pushback from administrators and the authorities? Though the boundaries may differ, a similar situation is faced by professional educators worldwide. Teachers and administrators almost everywhere are restricted by both formal curriculum guidelines and broader institutional, social, cultural, and political pressures, regardless of the locale.

Case in Point: Critical Futures Studies at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, Zhuhai, China

One way to situate critical thinking is to consider it as part of the discourse on the future. In this section, I use a largely ethnographic approach, outlining my experience in teaching Critical Futures Studies at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, Zhuhai, China, beginning in 2017. My purpose here is to provide an exemplar of the typical problems and opportunities for other educators in China (or similar environments), who wish to establish related programs.

I first came to live and work in mainland China in 2002 and have taught here for a total of ten years (with another decade in Taiwan and Hong Kong). During this time, I have experimented with various pedagogical methods,

with the purpose of improving critical thinking skills in Chinese students.

The Critical Futures-based courses I have developed and taught over the past 4 years include the following:

- Introduction to Futures Studies (for first and second-year students).
- Leading the Future (leadership-focused course for first-year students).
- Special Topics in Futures Studies (for Honours Programme students).
- Sensemaking in the Digital Society (part of Academic Integrated English, for second and third-year students)
- The Fourth Industrial Revolution (a course for third and fourth-year students, loosely focused upon the framework developed by Klaus Schwab (2016).

All these are single-semester courses.

These courses have mostly been developed by me within the Interdisciplinary Studies unit of the College. The curriculum framework is quite flexible, so I chose to use some of the approaches and tools of Critical Futures Studies to analyze relevant subject matters.

Critical Futures Studies is a well-established discipline which analyses and questions the future. It is a multi-disciplinary field whose ideological foundations are rooted in the ideas of poststructuralists like Michael Foucault and Jaques Derrida – although approaches and methods vary widely (Inayatullah 2018, 2021). It has a community of academics, theorists, and practitioners, with its primary journals including *Futures*, *The Journal of Futures Studies*, *Foresight*, and *World Futures Review*.

Critical Futures Studies emerged in the 1970s and has gradually evolved into a general discipline, albeit with certain divergent approaches (Inayatullah, 2002; 2018). In the Asia-Pacific region alone, there are several universities with Futures Studies units or programs. These include Tamkang University (Taiwan), Nanyang Technological University (Singapore), the University of Hawaii at Manoa, and the University of the Sunshine Coast and Swinburne University (Australia).⁵ Critical Futures Studies by definition

is about critically questioning the future—and by implication questioning the development of the world of today. For critical futurists the future is not just about prediction but about analyzing the way we think about futures, and working toward preferred futures (Inayatullah 2002, 2018).

Course Details

All of my Futures-oriented programs mentioned above are fifteen-week courses, with 45 total hours of instruction. They are typically divided into three or four units, with each unit focusing on one particular subject matter, including

- sensemaking in the Digital Age,
- technology and the Internet,
- the futures of Education,
- social media and the future,
- the environment and sustainability,
- the futures of music, and
- robots and the future.

The approach that I have employed in Zhuhai, China has been influenced by UNESCO futurist Sohail Inayatullah (2018). Inayatullah is an American-Pakistani futurist who has developed many analytical but practical methods to examine texts, ideas, and thinkers, as well as key concepts regarding the future. For simplicity, I selected just a few of these to teach my students. Given that the English language ability of the students at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology varies and is typically not advanced, I reduced all tools and concepts down to their simplest possible expression.

In most of these courses, I received anywhere from 5 to 30 students, most of whom were unfamiliar with Futures Studies. I therefore spent around 3 weeks establishing the foundational concepts and principles of Futures Studies. Inayatullah's (2008) Six Pillars of Futures Studies is used as a way to appreciate the topical range of Futures Studies, and to situate each of my preferred methods. Those

six pillars are: mapping, anticipating, timing, transforming visioning and deepening the future; and creating alternatives.

The following key concepts formed the basis of my critical approach to “knowledge” of the future.

1. The future is not set. We can influence the future.
2. There is more to the future than prediction (which is difficult). We can also analyze the way we think about it, and attempt to create desirable futures.
3. The future is not just about how technology and the internet will change everything (what I call “money and machines futures”). We can discuss multiple facets, including education and learning, society, religion and spirituality, the environment and nature, man's relationship to the universe, and much more (“deep futures”) (Anthony, 2012, 2021).
4. The way we think about and see the future is often a function of our own cognition: our beliefs, biases, prejudices, worldviews, and paradigms.
5. There are possible, probable, and preferred futures (Inayatullah 2002, 2006, 2018).

Some Analytical Tools of Critical Futures Studies

Many of the analytical (qualitative) tools employed in Critical Futures Studies can also be used for other analytical disciplines, especially in the social sciences and humanities. In courses as short as those I teach in China, I choose just a few of these tools, all of which were developed by Sohail Inayatullah (2002, 2006, 2018). I have taught all of the following to my students. I then got them to use the tools to analyze the topics at hand.

The Futures Triangle

The Critical Futures Studies method that I have had the most success with in China to date has

been the Futures Triangle (Inayatullah, 2018). The conceptual simplicity of the method is easy for students to grasp quickly. I had students successfully using this method both for smaller class projects and group work, and for major projects and theses. The Futures Triangle breaks down problems into three analytical categories.

Pushes: These are trends that are acting upon us in the present. Strong signals (clear trends) can usually be identified easily enough via media and social media. The development of the Internet of Things is a good example. Weak signals (emerging issues) are more problematic to detect, and may require a greater challenge to students' expectations and worldviews. So, while I introduced both concepts, I mostly use clear trends as the basis for our analyses. My students used both conventional search engines like Google (via VPN) and its Chinese equivalent Baidu as search engines, as well as the Shaping Tomorrow software.⁶

Pulls: These are images and popular narratives about the future, which may consciously or unconsciously influence the way we think about it. They can be found in popular discourses, social media, media, movies, music, advertising, and so on. For example, the idea of malevolent artificial intelligence overpowering humanity is a common theme in science fiction and often impacts discussions and thinking about AI and the future.

I initially found many students had trouble distinguishing pulls from pushes. By suggesting that pulls are "not yet actualized" while pushes can usually be seen or measured, the distinction became more apparent to them.

Weights: These are ideas and narratives which have mostly occurred in the past, but which still have some hold upon our thinking or behavior in the present. Weights can include traumatic events; but even historical successes can delimit thinking if we become attached to them. An example from China is the "century of humiliation" (beginning with the Opium Wars, till the Communist "liberation" in 1949). That period in Chinese history entrenched distrust in foreign powers, and has also contributed to the strong nationalism today.

There is a fourth component to the Futures Triangle and that is to assess the pulls, pushes, and weights and to then decide what we consider to be "the probable future" (Inayatullah, 2018). This final step is subjective, but the evaluator has to construct an argument to defend his or her assessment. A pair of my honors students working together, after identifying the pushes, pulls, and weights of their topic (the interface of deep learning and neurotechnology in healthcare), employed two scenarios to posit a possible *and* probable future, thus combining two methods in one assignment.

Students in my Futures courses were readily able to adopt this framework. My experience leads me to conclude that the Futures Triangle is an excellent tool for deepening Futures thinking skills amongst Chinese students, linking the past, the present, and possible futures.

Scenarios

There is a long history of scenario planning amongst futurists (Inayatullah, 2018; Tighe, 2019). Scenarios represent a formal way of creating narratives about the future. They are a powerful tool for assisting people and organizations to ponder how complex and unexpected situations and problems might develop—and be addressed—over the long term.

There are several major forms of scenarios (Tighe, 2019), but at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, I have simplified the scenarios concept, encouraging students to identify the possible, probable, and preferred futures of a subject matter. Students are required to give each scenario a precise date and timeline (using backcasting⁷), a provocative name, a descriptive narrative, and supporting evidence. Finally, the potential implications of the scenario must be identified.

Again, students used this method in class assignments and group work, while others used the method for major projects and theses. The results were mixed, but students were generally able to produce plausible scenarios, and back them with evidence. The most obvious limitation was that scenario planning is not something that

can be learned to a high level of sophistication in a few hours of class time, and thus there was a certain awkwardness to the process.

Causal Layered Analysis

Causal Layered Analysis (or CLA) is a method used for unpacking texts, ideas, and thinkers (Inayatullah, 2006; Inayatullah and Na, 2018). Whatever aspect of the future one may be examining, one can use CLA to reflect upon the operating factors which may emerge at four “levels” of a problem, in terms of both causes and possible solutions. Each subsequent level of CLA can be considered “deeper” (and often less visible, less discussed) than those above it.

The Litany: These are the superficial, easily observable features of a situation or problem. They often dominate the discourse, and may obfuscate deeper levels. That obfuscation may be deliberate, or it may be unconscious. This level may be predominantly descriptive. For my students, I preferred to call this the “surface” level.

The System Level: At this level, the influence of various social, cultural, technological, and institutional systems is addressed.

Worldview (and Paradigm): Here the internal maps of individuals, as well as collective belief systems and ways of knowing of cultures and peoples involved in the problem are identified. A worldview is the map of reality that one carries within one’s mind but may also be cultural or ethnic in nature, spanning a collective whole. There may be a strong overlap with the systems level, as social and cultural factors may span both.

At this level, one may examine the subtle or overt influence of broader systems of thinking, such as that found in Communism, capitalism, Confucianism, Daoism and Buddhism, the west, China, the USA, and so on.

Though it is an explicit part of Inayatullah’s CLA process, I have found that the concept of a paradigm is a little too abstract for most of my Chinese students to grasp in the limited time we have had at our disposal. The idea does not translate well into Chinese. The closest equivalents I have been able to find—*范式 (fanshi)* and *范例 (fanli)*—are closer to the idea of a “model” than the way native English speakers might think of a

“paradigm.” I ultimately abandoned my attempt to include this concept in my CLA analysis and just stuck with “worldview.” Though challenging, the latter is a far easier concept for Chinese students to grasp. It translates readily into the Chinese *世界观 (shijieguan)*, and many students seemed familiar with the idea.

Myths and Metaphors: At this level, we scan for the dominant and influential narratives that underpin situations and problems. We can also look at the common and defining linguistic and visual images and assess the effect they might have on the thinking and behavior of the people involved (Inayatullah, 2006). Myths can occur at many levels of society or within a discourse. Some myths may be based on fairly recent events. Yet longer-term founding myths of a group or nation may also have a great impact on attitudes and behaviors within a society.

I also sometimes introduced psycho-spiritual aspects of the problem at this final level of CLA, as I consider consciousness to be a prime “driver” of change. I found Chinese students to be quite open to such considerations.

Besides examining specific problems, we can also use CLA to examine specific thinkers, texts, speeches, and ideas, and see which levels of CLA are addressed in the discourse. Simplistic analyses and superficial reports may cover only one or two components. Sometimes this is deliberate, such as with propaganda or government reports which seek to present shallow accounts to obfuscate deeper problems (Inayatullah, 2006).

Needless to say, Causal Layered Analysis requires careful implementation when students are unfamiliar with deep analysis and ideas like deconstruction and multiple perspectives. The key is to simplify the process as much as possible. I typically develop simple examples, deconstructing a few common problems. Such examples can easily be turned into poster form, as a way of keeping the process in mind.

Hit to Kill: Causal Layered Analysis in Action

One case study I often get students to analyze as an introduction to Causal Layered Analysis

involves the alleged “hit to kill” phenomenon in China. This controversial problem (criticized by some as being based on poor sources) involves Chinese drivers deliberately driving back over pedestrians they have hit to ensure that they are dead.⁸ The alleged motivation for such brutal behaviors is that legal costs are cheaper for killing someone than for paying the ongoing maintenance for an injured survivor. The following example was cited in an article written on slate.com (Sant, 2015). This is the article which brought the alleged phenomenon to international attention.

In 2010 in Xinyi, video captured a wealthy young man reversing his BMW X6 out of a parking spot. He hits a 3-year-old boy, knocking the child to the ground and rolling over his skull. The driver then shifts his BMW into drive and crushes the child again. Remarkably, the driver then gets out of the BMW, puts the vehicle in reverse, and guides it with his hand as he walks the vehicle backward over the boy’s crumpled body. The man’s foot is so close to the toddler’s head that, if alive, the boy could have reached out and touched him. The driver then puts the BMW in drive again, running over the boy one last time as he drives away (Sant, 2015).

According to the article, the driver was charged only with accidentally causing death, after claiming to have confused the boy with a cardboard box or trash bag. Police rejected charges of murder and fleeing the scene of a crime (Sant, 2015).

I found my Chinese students to be horrified but fascinated with the hit-to-kill article and enthusiastically analyzed the problem. The following is representative of how my students categorized various factors and explanations behind the issue.

Surface Level

Here, students decided that the following explanations were “shallow.”

- These people (the drivers) are “bad.”
- They are “crazy.”

- They are greedy.

Systems Level

Students were able to pull these explanations from some articles about the problem and situate them at the systems level.

- Problems in the Chinese legal system.
- Chinese society is too competitive.
- “Capitalism does this to people.”

Worldview (Paradigm) Level

This is the CLA level that students struggled most with. The concept of worldview needs to be clearly explained, with clear examples for individuals, groups, cultures, and nations. This takes some time.

There was typically wide disagreement, perhaps partly due to confusion about the “worldview” concept. But the biggest issue is that explanations at this level (and the myth-metaphor level) were completely absent from the texts we examined, so students were forced to come up with their own answers. Some students blamed elements of Confucian hierarchies, which they thought might be influencing the drivers’ behavior. Similarly, some thought Confucian culture teaches people to care primarily for family, but not so much for outsiders. Others thought that some aspects of Chinese history were to blame for a lack of care for strangers, while others said that China is still “not quite civilized.” Clearly, some of these ideas are politically sensitive in China, so the teacher has to be mindful of how they are handled.

Myth/Metaphor Level

This level of CLA is also not so easy for students to grasp. Yet in one class, students were able to identify some related popular stories that had gone around the Chinese media and internet. For example, in 2007 in Nanjing, a young man took an old woman to hospital after she fell at a bus stop. Later the older woman demanded the young man pay the

medical bill, saying he knocked her over. The man denied wrongdoing, but the court ruled that the man should pay almost half of the medical costs. This caused public outrage (Fang, 2015).

In fact, in the *People's Daily*, a Chinese college professor examined 149 similar disputes and found that helpers got “framed” in 84 cases. The myth of elderly accident scammers has become so pervasive that insurance companies in China now have 60,000 people who have signed up for protection against such scammers (Fang, 2015).

Some students accepted that “myths” such as these have led to greater distrust amongst citizens in China, and might contribute to the “heartlessness” shown by some motorists in the hit-to-kill incidents.

In summary, Causal Layered Analysis is not a tool that I have found my Chinese students to adapt to easily, and a lack of curriculum time has been key here. One issue has been that situating ideas at the different CLA levels is not always straightforward. Many ideas and problems traverse two or more of the levels, and this can confuse students. I addressed this by assuring the students that as long as they could justify their categorization, I would accept their structuring of the issue at hand. Nonetheless, I found that most students struggled with the rationalization of the tool. The purpose of CLA—to deepen analyses of the future - needs to be clearly outlined to students before the teacher attempts to get students to use it.

Practical Suggestions for Encouraging Critical Thinking in Chinese Students

I have gleaned several insights and strategies regarding teaching critical thinking, gleaned from my experience teaching Critical Futures-related subjects to Chinese students in an environment which employs English as a second language. I briefly list some here as recommendations to other educators with similar learning environments, goals, and curricula.

- The teacher and administrators should take care to make the course relevant to the student’s academic needs and interests.
- Include stronger and weaker English-level students in individual groups. If too many weaker students are in a group, it may not function effectively.
- Small group and pair work can be used to examine issues critically, and to encourage students to share insights. This approach can be used to encourage the generation of questions, as well as answers. Instead of asking the entire class a question and expecting raised hands (which rarely happens in China), the teacher can instead get the students to answer the questions in pairs, then later open the discussion up to the whole class.
- Time and patience is required from the teacher. Students need to be encouraged to persist. It requires time to explain and become familiar with ideas like world-view, metaphor, critical thinking, and so on. Scaffolding is thus often necessary, with key ideas and processes slowly introduced over time.
- Innovative and novel activities need to be intermeshed with more traditional educational processes. Students should have the opportunity to utilize the skills and abilities they already have developed in the Chinese education system. Therefore, teachers should consider using teacher lectures, quizzes, homework, question sheets, repetition, and so on. Teacher-centered learning can be effectively combined with student-centered learning, especially early in any program. Innovative pedagogy needs to be balanced with the familiar so that students do not feel too disoriented (Inayatullah & Li, 2018).
- Teachers should spend several lessons at the beginning of the course to situate Critical Futures Studies in time and location. I personally spend around ten hours of curriculum time for my Futures-centered courses. Taking the time to legitimate the course and to let the students

know “what, why, and how” can assist with relevance and motivation.

- Ideally, in the age of the Internet, multi-media should be included, amongst other more academic texts. Computers and mobile phones can be used as dictionaries, to reduce paper usage and to access materials, while music and songs can be used for a wide variety of purposes. Further, there are TED talks and YouTube videos on numerous subjects which can stimulate thinking and activate listening skills. Movies and TV shows also can be watched and analyzed. For example, in several of my classes students watched and analyzed an episode of the Netflix series *Black Mirror* called “Hated in the Nation.” This episode examines psychological abuse on social media, as well as security issues with drone technology in the near future.

Possible Curriculum Approaches

When we think of teaching critical thinking to students, we tend to think of classroom applications, most likely using specific case studies or examples to focus upon. Yet the truth is there are multiple ways to go about the task.

Schools can reflect upon how proficient they wish students to become at critical thinking. Is it to be a major or minor focus within the curriculum?

We might like to reflect upon Pareto’s principle: that 80% of the benefit within an application or process comes from twenty percent of the work (Koch, 2014). The key then is to decide what tools and processes to implement, and what to leave out. For most educational institutions in China, critical thinking and liberal education will not be their prime focus. Instead, it will be a peripheral consideration. The question then becomes: how do we teach these skills without being too intrusive on established curriculum, or taking up valuable time of teachers and administrators? If we become too intrusive, we are likely to invoke the ire of these people, the very people we need to make any critical thinking policy work.

Embedding Critical Thinking within Specific Curricula

Rather than attempt to embed critical thinking within all subjects, a more efficient approach might be to find one or more departments, programs, or courses within the institution which are both capable and willing to bring forth a critical thinking focus. Ideally, if the goal is to infuse the entire student body with critical thinking skills, this should be a first-year course. However, later courses could be considered. For example, third and fourth-year courses as well as masters and PhD programs can be used to produce graduates with adept thinking skills.

Most of the Critical Futures-centered courses I created at Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology have been developed as part of the English and Interdisciplinary Studies department. The department core syllabus document permits courses to include much focus upon critical thinking. PRC-based institutions within Chinese-foreign collaborations can develop general education and citizenship courses which meet the requirements of foreign universities, and which also expand the students’ thinking skills. Many American universities which are partner schools to Chinese educational institutions are receptive to “citizenship” programs. These include Mercer University (General education, 2017), the University of New Mexico (2017), and Pace University (University core, 2017).

For the past three semesters at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, I have run a Topics in Futures Studies course as part of the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology Honours Programme, which features our highest-performing academic students. As coordinator of that program, I embedded the following learning outcomes as requirements for all teachers who developed courses for the program (Anthony, 2020).⁹

General Skills Outcomes

- *Leadership skills:* Responsibility, self-awareness, maturity, compassion, communication skills, the ability to make informed, and intelligent choices are all essential to leadership skills.
- *Entrepreneurial skills:* Entrepreneurial skills will likely become increasingly important in the workplaces and societies of the future (Priestley, 2018), in light of the mobilization of work and the gig economy. Entrepreneurs tend to be open to change, innovative, action-oriented, forward-thinking, passionate, self-motivated, introspective, and intuitive.

Attitudinal Outcomes

- *Resilience:* Students should be encouraged to deal with challenge, including setbacks, failure, and the unexpected. Moving out of one's comfort zone entails at least moderate levels of discomfort and discontinuity.
- *Adaptability:* Change is a constant of contemporary society, especially in China. Students should be able to deal with novel situations and tasks in the classroom and outside. The classroom should thus be a dynamic environment which challenges students' habits and expectations.
- *Optimism:* Media and social media are often driven by click-bait, pessimistic views of the world and the future, while rigid and hierarchical education systems may instill a sense of helplessness in many students. Optimism can be learned through positive reinforcement, as Martin Seligman (2006) has long stated, as well as a solutions-based focus on problems.

Cognitive Skills Outcomes

Critical thinking, creativity, and innovation

- Students will be able to deeply analyze the causes of significant problems,

moving beyond immediate causes and into systemic, civilizational, psychological, and mythological drivers (where appropriate) and to suggest workable solutions at each level of the analysis.

- Students will be able to generate intelligent and insightful questions related to their areas of enquiry, and where possible addressing the problem in depth (beyond worldview and paradigmatic boundaries).
- Students will show originality and independent thinking in their work, and innovation in suggesting practical applications.
- Students should be able to identify common logical fallacies of argumentation.

Introspection and Metacognition

- Students should be encouraged to engage in quiet time and self-reflection, such that they may learn from their experience in the HP (and in their lives in general). Regular journaling, reading, and/or specified "retreat" time are recommended (McKeown, 2014).
- Students may be encouraged to reflect on how they learn (journaling can be helpful) and to experiment with new ways of learning and knowing, particularly where their current learning methods are seen to be inefficient or outdated.

Each of these learning outcomes either directly or indirectly facilitates enhanced critical thinking.

Positive Results

Evaluations of the various Futures-oriented courses gleaned from students were almost all very positive. The idea of change and the future is intrinsically interesting to most students today, and as mentioned above, I made a point to choose interesting and relevant subject matters for students to examine. At the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, I thus

found that most students were highly motivated to explore the subject matter. Besides the two in-course student essays and presentations, the final component of each course included 2 weeks of student-directed research and writing, where students were able to analyze a futures-related topic of their choice, and produce a report on it using any one of the Futures methods taught to them. Their mastery of the course content, including capacity for critical and analytical thinking, could be readily assessed in this way. Some of the kinds of learning outcomes listed in the previous section are included in the assessment of that final assignment. In almost all cases, the assessment tasks were of good standard, with some outstanding student contributions.

The Problem of Politics

Despite the positive results I saw at the Foresight and Strategy (Centre for English and Interdisciplinary Studies), College of Global Talents, Beijing Institute of Technology, there are certain problems that teachers and administrators are likely to face when encouraging critical thinking-based courses (including Critical Futures Studies) in a PRC classroom.

Politics: All stakeholders concerned with education in China have to be conscious of political considerations. Teachers and students will need to avoid criticism of sensitive topics such as 1989, and the situation in regard to Tibet, Xinjiang, and Taiwan. Needless to say, direct criticism of the Communist Party is a definite taboo. Foreign teachers who are new to China will need to be instructed on this issue. While this may irritate some foreign teachers, I like to compare this to the self-censorship required in many western educational settings today, in lieu of increasing political correctness.

As mentioned, a prime aim of Critical Futures Studies is to determine who benefits from specific futures, as well as which approaches privilege certain representations of the future. A key focus is thus disturbing existing power structures through problematizing them and their categories (Inayatullah, 2021). In the

Chinese educational context, both post-structuralist criticality and critical thinking need to be applied mindfully, due to the sensitive political context. The more aggressive forms of poststructuralist analysis are not feasible applications in Chinese education today. Analytical methods like Causal Layered Analysis are directly inspired by poststructuralist thought (Inayatullah, 2015, 2021). Therefore, when applied in mainland China, references to the philosophical underpinnings of critical futures methods often need to be toned down. Nonetheless, much of the practical functionality can be retained.

While critical thinking is being explored (somewhat) lightly in China today, the more aggressive postmodern polity seeks to identify and break down power structures within institutions, cultures, societies, and politics in general. In the 1950s, western Marxists shifted their focus from class struggle to identity politics. Emergent fields have included feminism/gender studies, postcolonial studies, and race politics (Hicks, 2004). Generally speaking, for teachers working within China, the more stringent “critical studies” approach is best left to exploring non-Chinese topics and ideas. Clearly, China’s more authoritarian and top-down power structure, and the direct influence of the Communist Party in almost all aspects of society, means that deconstruction of any of that political organization’s power and authority is strictly off-limits.

There may also be some resistance to Critical Futures Studies from some administrators (Inayatullah, 2018), parents, and students, who are typically most concerned about ensuring that test scores are maximized. Some teachers and administrators may resist change, so they may need to be encouraged to experiment with new pedagogical tools and approaches. Such changes require time and patience. Developing trust and a good relationship with one’s superiors (*guanxi*) is crucial to adaptation to Chinese society, and that includes its education system. More tact and less direct confrontation and criticism are required.

Regardless of whatever ideals and philosophies underpin critical thinking curricula, there will remain the inherent tension that it may possibly challenge both power structures

and culture in China. Curriculum designers, administrators, and educators should keep this firmly in mind.

Situating the Practitioner

As a trained practitioner of Critical Futures Studies, it is an insightful exercise to employ Causal Layered Analysis to reflect upon my role within my institution and China in general.

The Litany

At a superficial perspective, I am Associate Professor of Foresight and Strategy at a Business School in Zhuhai, China. I teach within the English and Interdisciplinary Studies Unit. A casual observer might note that I a foreigner, teach and predominantly in English, as is the expectation of my employer, using merely a smattering of Chinese when needed, mostly for explication of precise Futures Studies vocabulary and concepts.

Systems and Society

My prime expectation as an educator in China is to enable my students to pass my courses, and to assist them to graduate. For several decades now it has been seen as desirable for Chinese students to receive degrees from western universities. The College of Global Talents at the Beijing Institute of Technology, Zhuhai has eight partner schools abroad, mostly in the United States, so there are also expectations from various local stakeholders—students, administrators, parents—to assist my students to study abroad. Those partner schools also wish to receive Chinese students who are proficient users of English and understand academic protocols (an awareness of plagiarism, a proficiency at academic writing and critical thinking, and an ability to engage classmates and the teacher and to understand general principles of western cultures).

There is also an understanding from my employer that at the political level, I will not indoctrinate the students with ideas that might be considered anti-Chinese, anti-communist

Party or which violate the general politically correct views of the state. This situation initially created some tension for me as someone who values an open society, independent thinking and many of the western ideals of human rights—in short, I am a product of the western liberal tradition. Ironically, in recent years I have also become critical of the way that liberalism has been, to my mind, increasingly betrayed in many domains of western knowledge production, including in the media, universities, and in various political movements (Anthony, 2020). It is my perception that society and politics in the West have in recent years have moved ever closer to the “technological solutionism” of the Chinese authoritarian model, more so than many in the west are willing to admit—a problem exacerbated by the COVID-19 situation (Morozov, 2020). Observing that shift has softened my attitude toward the Chinese political system. I no longer believe that the West has a clear moral superiority to China in terms of freedoms, human rights, and political maturity. Repeated misrepresentations of China by western media outlets, politicians, and celebrities have led me to re-contextualize Chinese anti-Western propaganda (which is equally omnipresent). Finally, as a long-time practitioner of introspection and shadow work (Anthony, 2010, 2021), I have reflected upon my own judgments and prejudices toward China and believe that I have assumed responsibility for them and integrated them.

Therefore, I believe that when I engage Chinese students they can sense my even-handed attitude toward the country. I retain concerns regarding political and social problems in the country, but these do not impede my capacity to “reach” students in other ways, via non-politicized topics, and via other approaches to learning and wisdom that transcend the politics, as well as my potential personal projections.

Worldview and Paradigm

At the worldview level, my own influences transcend the most dominant current western

worldviews. At present in the west, it can be argued that we are between worldviews, with the endless growth/dominator mindset being increasingly challenged by a more liberal and progressive ideal. But with the ascent of a contradictory authoritarian “illiberal” bent in that latter process (Anthony 2020; Haidt, 2012; Haidt and Lukianoff, 2018), the denouement remains unclear. I am not an advocate for any of these worldviews, but instead examine specific issues according to their merit, as best I can. This is more in line with the distancing process explicit within Critical Futures Studies (Inayatullah, 2018). Other influences on my thinking are Chinese Daoism (Goddard, 2014); Buddhism and mindfulness practice (Jacobson, 2009; Tolle, 2009); and Ken Wilber’s (2001) Integral movement. I have no name for my syncretic worldview and am reluctant to give it one.

For years, I was disinclined to bring up the more transcendental and spiritual aspects of my worldview (and research) in the classroom, but now find myself more regularly doing so. My referencing of Deep Futures is perhaps the most salient example, part of a dual model I developed to analyze possible futures (Anthony, 2010). Further, my most recent course, Sensemaking in the Digital Society, directly addresses concepts like embodiment, mindfulness, and intuitive ways of knowing. The balancing of the head and heart is actually very compatible with traditional Chinese thinking. In Chinese, the word for psychology is *xinxue* (心理学), which literally means the study of what lies in the heart. And yet it is strictly forbidden in my work contract to attempt to instill religious and “superstitious” ideas into my students. But in practice this has caused no conflict, as I introduce such ideas juxtaposed alongside more commonly referenced “rational” and scientific ideas. My experience is thus that teaching in the Chinese education systems allows for a surprisingly wide range of thinking to be brought forward and discussed.

Myths and Metaphors

In Chinese/Confucian culture the teacher is clearly above the student on the social hierarchy.

The teacher is seemingly cast as an omniscient teller of truths, while the student is the empty vessel that receives the sacred text—a revelation to be regurgitated in the end of semester exam. However, I see myself more as a facilitator, one who fills not a bucket, but lights a fire. This cultural difference is not easy to bridge. Getting students to ask questions or query the teacher’s process, for example, can be difficult. And it is true that my role at the school sometimes sees me slipping back into Confucian mode.

In short, there are certain inherent conflicts of interest and worldview that are entailed in a foreigner teaching Critical Futures Studies in China. As mentioned, the more aggressive gaze of the poststructural tradition has to fall Westward, not inward to (potentially) illuminate Chinese civilization. Nonetheless, I often invite my students to reflect upon how the issues of power and privilege in the West might also apply to China—and leave it at that. It is my hope that these small seeds of insight and criticality might germinate upon the social and intellectual fields of China that my students later cultivate.

In Conclusion

The traditional Confucian approach to knowledge and social development tends to be conservative (Fairbank & Goldman 2006; Zhao, 2014). Yet the modern world (and especially China) is change-oriented, not static. There is a need for China to bring its education system into the present and prepare its citizens for a more dynamic future (Zhao, 2014). Therefore, today’s students will need critical thinking not only to succeed in education, but in the world at large. Looking at the global perspective, sustainable futures will require citizens who can think for themselves, critique and solve problems, and imagine preferred and alternative futures. Therefore, there is a great opportunity today for Chinese tertiary institutions to reform and transform in ways that represent tremendous advantage for both China and the world. Critical Futures Studies is intrinsically interesting and relevant and is one potential and viable means to enhance both criticality and critical thinking skills in today’s

Chinese students. If taught mindfully and in ways respectful to China and its cultural and political systems, Critical Futures Studies can potentially play a key role in China's transformation into a knowledge society—or perhaps even a Deep Future.

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Notes

1. The gaokao is the Chinese secondary school leaving certificate, which is incredibly competitive, determining the ranking of the university a student may enter, and thus much of their future life.
2. Before 2016, Shanghai was the only Chinese city which participated in the PISA. After 2016, a total of four Chinese provinces were tested under the label “China.”
3. The author's school is one of them.
4. Of course, the COVID-19 situation has greatly impacted numbers at the time of writing.
5. Not all these institutions focus upon Critical Futures Studies, but may include a variety of philosophical and methodological approaches to examine the future.
6. Shaping Tomorrow's website is www.shapingtomorrow.com. In some of my courses, I spent a lesson or two teaching the students how to use the software. I found that to be used effectively, the teacher needs to actively encourage its use; otherwise, students will tend to revert to the more familiar Bing or Google. Due to time constraints, I was only able to teach the most basic elements of the software. One thing Futures educators could consider is to design an entire course around this software.

7. Backcasting begins with an end future vision or scenario at a specified time in the future, and then works backwards, positing the steps (with dates) that might lead to that end scenario unfolding (Inayatullah, 2018).
8. I spent some time addressing the prevalence of anti-China bias and stereotyping in foreign media, and the idea of media bias in general.
9. The syllabus extract has been abbreviated.

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