—

WHY I SHOULD, AND WHY I SHOULD NOT, EXPECT MY STUDENTS TO BE GOOD AT CRITICAL THINKING.

Stephen John Waller

ABSTRACT

There has been a major increase in the number of Chinese students in Western English-medium Higher Education institutions. These students face many academic challenges, with one of the most significant being an expectation to demonstrate critical thinking skills. However, it has often been expressed that Chinese students fail to display this ability. Common reasons given for this include a lack of emphasis in their culture, a lack of emphasis in their previous learning experience, and difficulties in language. This article argues that Chinese students are as proficient at critical thinking as other students, and that the main reasons for the problems they encounter are language ability and the appropriate methods of expressing critical thinking in this environment.

INTRODUCTION

Increasing numbers of Asian students are studying at Western English-medium Higher Education institutions (hereafter Western HEIs) (OECD, 2009, as cited in Lun, Fischer, & Ward, 2010), and this has included a rapid rise in the number of Mainland Chinese (hereafter Chinese) students. The term 'Western' is used here to mean countries in Western Europe, North America, Australia and New Zealand, particularly the countries in these regions that have English as their first language. The term Western HEIs includes universities in these countries, as well as those set up in other countries by institutions from these countries, which use English as the main language of instruction. Chinese students at these institutions face many cultural and academic challenges due to different approaches to learning (Turner, 2006). One of the most significant challenges is an expectation to demonstrate a use of critical thinking (CT) skills. There has been a commonly held view amongst many academic staff at Western HEIs that Asian students, including Chinese, are not able to do this (e.g. Paton, 2005; Robertson, Line, Jones, & Thomas, 2000). There have been a variety of reasons given for this apparent lack of CT, including a lack of emphasis in their culture (Atkinson, 1997), a lack of emphasis in their previous learning experience (Tian & Low, 2011), and difficulties in language (Floyd, 2011).

As an academic tutor of Chinese students, I used to assume that many Chinese students lacked the ability to think critically, which affected their academic performance. However, these views have since been somewhat countered by the fact that I have taught Chinese students who have displayed good CT skills; furthermore, in previous research (Waller, 2010) I found that Chinese students can adapt to UK educational cultural norms and be successful, despite experiencing many difficulties at the beginning of their studies.

The aim of this article is to argue that there is evidence that Chinese students do have comparable CT skills to other students. However, there can be an unreasonable expectation placed on Chinese students to display these skills at the beginning of their courses (both bachelors and masters) because of language difficulties, and the expected methods of expressing CT, which they may not be familiar with because of their educational background. This can influence the aforementioned negative perception of Chinese students with regards to CT.

WHAT IS CT?

There are many definitions of CT (e.g. Facione, 1990; Scriven & Paul, 1987). Mason (2007) summarises some well-known viewpoints, highlighting important aspects of CT, such as critical reasoning (e.g. the ability of evaluating reasons), certain dispositions (e.g. an inclination to ask questions and a moral attitude), and considerable knowledge of content. Floyd (2011, p. 291) asserts that the various definitions of CT, despite some disparities, have common themes of "reasoning, inferring, evaluating arguments and deduction". This observation can be combined with Ennis' (1998) summary of his own ideas to make a general definition of CT to be used in this article: "reasonable, reflective thinking" (Ennis, 1998, p. 17), using "reasoning, inferring, evaluation and deduction" (Floyd, 2011, p. 291), which "is focused on deciding what to believe or do" (Ennis, 1998, p. 17).

THE IMPORTANCE OF CT IN WESTERN HEIS

CT is often identified as an important aspect of Western HEIs (e.g. Floyd, 2011). One reason for this is that students require such skills to help process the significant amounts of information they encounter (Lun et al., 2010). Furthermore, Nesi and Gardner (2006, as cited in Wingate, 2012) discovered in their study of writing assessment over twenty disciplines that a commonly regarded value of the essay is the ability to develop an argument within curriculum contexts.

Perhaps another reason that Western universities embrace and attempt to develop this skill is that it is also recognised as being important in life. Moore (2004) states that the majority of contemporary educators believe that CT is not only crucial for good teaching, but also for being an engaged and active global citizen. According to Larson, Britt, and Kurby (2009), being able to assess arguments is an essential part of interacting socially and making decisions, as well as being important at university. Furthermore, Ten Dam and Volman (2004) state that CT is a crucial part of life in modern Western society, and, hence, is often encouraged in Western schools and promoted in Higher Education. This is because people are expected to make and understand their own choices, respect the decisions and viewpoints of others, discuss these viewpoints, and form, and make known, their own opinions (Ten Dam & Volman, 2004).

Although CT is highly valued in Western societies, this does not necessarily mean it is valued globally. However, Ennis (1996a, p. 1, as quoted in Davidson, 1998, p. 121) argues that if one does not apply CT to some extent then you are likely to "believe everything you read and hear", and it would seem highly unlikely that any person or culture does this to any great extent. This would explain why, as Egege and Kutieleh (2004) observe, Asian students have stated that after taking courses introducing them to CT, they have realised that they do this in their own country despite not knowing what it is or having any training in it.

CHINESE STUDENTS IN WESTERN HEIS

As highlighted above, there has been widespread opinion that Chinese students lack CT skills, particularly in Western HEIs. However, there is little in the literature to explain why these opinions are so prevalent.

According to Lun et al. (2010) the argument that Asian learners think in a less critical way is principally based on interpretations by English-second-language (ESL) teaching professionals. Paton (2005) states that one reason given for stating that Asian and Chinese students lack CT skills is that they often fail to participate in discussions and an exchange of ideas. In Robertson et al.'s (2000) study, academic staff highlighted in open-ended questionnaires other problems that East Asian students sometimes have. These included having difficulty with the notion of no single correct answer, avoiding giving personal opinions, not questioning information in books or from lecturers, and using inappropriate discourse patterns in writing and speaking. Durkin (2008) also discusses the idea that East Asian students tend to avoid giving personal opinions as well as the difficulty they often experience with a Western discussion style that encourages the challenging of opinions. These are also common problems among many of my own first year Chinese university students. However, it is possible that these difficulties are not due to a lack of CT skills, and can be explained by other reasons. These reasons will be discussed in the following three sections.

METHODS OF REASONING

A possible cultural reason for Chinese students' apparent lack of CT skills is that they have a different method of reasoning to Western students. Egege and Kutieleh (2004, p.79) highlight differences in thinking between the Western philosophic tradition and the Chinese tradition. Norenzayan, Smith, Kim, and Nisbett (2002) expand on this notion of different methods of reasoning. Based on their review of the literature, they posit that one reasoning system is analytical, based on following formal logical rules, while the other is more intuitive and experienced based. They suggest that although people in different cultures are likely to use both cognitive strategies, analytical modes of thought are

used more by Western cultural groups, whereas East Asian groups tend to prefer intuitive based reasoning. The results of their own investigation, which involved Chinese, Korean and American university students being tested on categorisation, conceptual structure, and deductive reasoning, support these notions of preferred reasoning styles. Crucially, however, an extensive review of research into differences in culture and cognitive processes used found no evidence of a lack of CT skills in Chinese students (Nisbett, Peng, Choi, & Norenzayan, 2001, as cited in Floyd, 2011). In fact, empirical research supports the view that Chinese students openly display elements of CT. For example, Chiu (2014) discusses how students from Beijing used CT skills (evaluation, analysis, deduction, inference, and reasoning) during asynchronous English language discussions with Taiwanese students on the Internet. In part of their own empirical study, Lun et al. (2010), taking into account assessed English language and general intellectual capabilities, used the Watson–Glaser Critical Thinking Appraisal (WGCTA) Short Form to measure the CT skills of their participants who were New Zealand European (New Zealanders of European descent), and Asian students. The WGCTA tests "inference, recognition of assumptions, deduction (whether conclusions necessarily follow), interpretation (whether conclusions logically follow) and evaluation of arguments" (Floyd, 2011, p. 291). Lun et al. (2010) discovered that differing styles of reasoning did not appear to significantly affect the CT performance of Asian or New Zealand European students, and the differences in CT between these two groups were more related to language issues (in other words, using English as a second language) than cultural ones.

SECOND LANGUAGE USE

Research shows that difficulty with a second language can affect thinking processes and the

capability to cope with challenging tasks. Campbell, Davis, and Adams (2007) use the concept of Cognitive Load Theory (CLT) (see Paas, Renkl, & Sweller, 2003; Paas, Tuovinen, Tabbers, & Van Gerven, 2003) to explain how students performing mathematical tasks in a second language sometimes experience cognitive overload, due to attempting to comprehend unfamiliar language, which affects their ability to complete the tasks. This theory states that there is a limited working memory where "all conscious cognitive processing occurs" (Paas, Renkl, et al., 2003, p. 2). If the combined amount of information is greater than the working memory capacity, this results in cognitive overload (Campbell, Davis, & Adams, 2007), and the processing of information is impeded. It would seem likely that CT tasks in a second language are similarly affected. Kirby, Woodhouse, and Ma (1996) suggest that learners lacking second language expertise have less ability to use higher level understanding processes, ones that are likely to be easier to use for those with a higher proficiency, and these problems are compounded in an academic (specialist) environment. This research, as well as that of Koda (2005, as cited in Floyd, 2011), suggests that using a second language can negatively influence many complex cognitive abilities. Hence, research which finds poor performance by non-native language users should acknowledge this cognitive deficiency caused by using a second language (Cook, 1993, as cited in Floyd, 2011). Floyd's own study with a group of 55 Chinese learners, also used the WGCTA Short Form. She used a split form of the WGCTA in Chinese and English with one group taking the Chinese half first and the other taking the English part first. Her findings confirm that performing a CT task in a non-native language is more difficult than performing the same task in a native language.

Therefore, problems with language can affect the ability to use CT. Students are less likely to be able

to express their CT skills in class if they do not have the necessary language skills and confidence in their language use (Lun et al., 2010). A certain amount of language proficiency is required for CT skills (e.g. verbal reasoning and argument) (Lun et al., 2010) in order to understand the ideas of others as well as express one's own ideas. For example, the misuse of vocabulary and grammar can cause a written text to lack coherence (Waller, 2015), and can seriously affect the logic of an argument. This is a problem I have often noticed with my students, and similar difficulties can also occur with spoken language.

EDUCATIONAL BACKGROUND AND THE EXPRESSION OF CT

Another factor which could possibly affect some Chinese students' ability to demonstrate CT in Western HEIs is their educational upbringing. Durkin (2008) considers how many East Asian students, including Chinese, find the Western seminar debating style (i.e. challenging and critiquing the viewpoints of other students and lecturers) to be confusing and intimidating. Lessons in Chinese classrooms are usually dominated by book-based, teacher-centred interaction, and student achievement is measured by standardised examinations (Liu et al., 2015). Therefore, as Wu (2015, p. 758) explains, because answers have always been provided by "authority figures", it may seem extremely unusual to question tutors or books in class and openly expressing their own viewpoint may seem worthless. Wu adds that some students may simply worry about giving an incorrect answer. In terms of demonstrating CT in academic writing, Jin and Cortazzi (2006) explain that Chinese learners may have little experience of using the discourse patterns accepted in Western HEIs, and are usually unaware of academic conventions for writing assessments, such as expected critical responses and styles used for giving opinions. However, it should be acknowledged, that

the difficulties mentioned in this paragraph are not only experienced by Chinese and East Asian students, as I myself can testify. In addition, it would appear that many Western students have difficulty with some aspects of CT, as explained in the next section.

CT IN WESTERN STUDENTS

When examining the literature on the CT skills of Western students, it is apparent that Western students can also have difficulties with certain aspects of CT. As Paton (2005) explains, some students of all nationalities (including native speaker students) display a lack of CT skills at the beginning of their tertiary studies. Furthermore, there have been various studies that show native English speakers lack CT skills. Larson, Britt and Larson (2004) examined 76 American university students and discovered that they only had 30 percent accuracy at identifying the important parts of an argument; furthermore, after a tutorial, students were still unable to successfully rebut arguments. Another study in the U.S., by Larson et al. (2009), which tested 57 native English-speaking students, found that without a tutorial on argumentation, these students were often unable to differentiate between acceptable and unacceptable arguments. Finally, a study by Wingate (2012) into undergraduate students starting courses at a UK university showed that many had incomplete ideas about the nature of written arguments and had difficulties with the development of arguments in essays. According to Wingate, many of the problems encountered were due to lacking knowledge about what argumentative essays require.

Durkin (2008, p. 18) discusses research which has examined how Western students undergo a number of changes in their learning development after entering university, such as the transformation from believing that knowledge is absolute and that simply reproducing information in assignments is acceptable, to being

able to recognise the possibility of a variety of opinions and making conclusions based on evidence. This process is not dissimilar to that which Chinese students often need to follow in order to adapt to the same tertiary education environment. Furthermore, Court (2002, as cited in Durkin, 2008, p. 18) has discovered that some British students confront comparable challenges to those of Chinese students in the development of the CT skills necessary for tertiary education. Hence, it is clear that native English-speaking students sometimes have difficulties with elements of CT, and that these problems are not exclusively encountered by Chinese (or Asian) students. Indeed, Pennington (2003, as cited in Paton, 2005) argues that many first year students, of all backgrounds, lack some higher-level CT skills, such as reflective thinking, and therefore need training in these areas.

THE CULTURAL 'OTHERISATION' OF CHINESE STUDENTS

It would appear that there is a danger of cultural stereotyping when it comes to Chinese learners. According to Floyd (2011), when a Chinese student shows deficiencies in CT, it may be regarded as a cultural problem, whereas the same problems in a Western student are often seen as individual. She adds that studies about CT deficiencies in Western populations are often ignored when judging Asian ones. These actions may be influenced by what Grimshaw (2007, p. 299) calls a depiction of Chinese learners as a "reduced Other". He asserts that this occurs in much of the literature about these learners. The contrast of Chinese students with Western ones, and an inclination to view the former as a homogeneous group influenced by Confucian traditions, has caused a perception of a supposed Chinese learning culture which is completely different, or even inferior, to those from the West (Grimshaw, 2007; Shi, 2006). Clark and Gieve (2006, p. 54) name this the Chinese learners

"deficit model", with key features being silence in class, passivity, a dependence on rote memorisation strategies, and a deficiency in CT skills. Some authors have actually claimed thinking critically is incompatible with specific principles underlying Chinese cultural beliefs (e.g. Atkinson, 1997; Fox, 1994). However, Li and Wegerif (2014, p. 31) explain that the traditional Chinese approach to teaching thinking "is collective and social but relatively quiet and not always easily visible in classrooms"; however, it can still lead to deep understanding. As explained above, problems that Chinese students have using CT are much more likely to be caused by language problems and educational upbringing, and not culture in general. Indeed, Kumaravadivelu (2008) argues that there is no empirical evidence for a causal link between the cultural practices and beliefs of any Asian students and their behaviour in classrooms.

Other authors have even challenged the actual concept of a specific Chinese learning culture. Grimshaw (2007), Littlewood (2003), Shi (2006), and Stephens (1997) all provide evidence of Chinese students not seeming to fit the stereotypical notion of Chinese learners by having a variety of different learning preferences and approaches, and sometimes demonstrating similar learning characteristics to students from other nations. These include valuing aspects of CT, such as questioning teachers (e.g. Stephens, 1997) and books (Shi, 2006), as well as valuing the giving of opinions (e.g. Littlewood, 2003). Furthermore, not only does research support the viewpoint that Chinese students display features of CT, as highlighted above, but it also indicates that Chinese students can adapt to Western educational settings (e.g. Cross & Hitchcock, 2007), which includes the use of CT.

CONCLUSION
In this article I have investigated varying contested notions regarding CT and Chinese

students. I have discussed what CT is, explaining that there are common ideas across these different definitions, and considered the importance of CT. In addition, I have demonstrated that there is evidence to suggest that Chinese students can be as proficient in CT skills as students of other backgrounds, including Western students. The reasons for Chinese students not displaying CT skills in Western HEIs, particularly when they commence courses, are more likely related to problems with language, which has been shown to affect CT. In addition, difficulties emerge for many Chinese learners with the ways they are often expected to express CT.

Although these methods of expression may conflict with previous learning experience, this does not mean these students are incapable of critical thinking or indeed adapting to these new approaches. Despite the difficulties that previous learning approaches, and a lack of experience of the new learning approaches, may cause at Western HEIs, many Chinese students can adapt over time. Academic staff need to remember that some Chinese students, and students of other backgrounds, need clear guidelines about what is expected in terms of CT and other aspects which are affected by CT, such as discussion and essay structure. Lecturers and tutors also need to be aware of the learning background of Chinese students. Moreover, they need to understand the difficulties of thinking critically in a second language.

Additionally, it has been shown above that there is a danger of cultural stereotyping when it comes to Chinese learners. Although it is beneficial to be aware of the similar problems and features that Chinese learners share, it is also important to be aware of individual characteristics of these learners, just as for Western learners. In fact, just as some Western students have difficulties with CT, it should not be a great surprise that some

Chinese students also have these problems.

REFERENCES

Atkinson, D. (1997). A critical approach to critical thinking in TESOL. TESOL Quarterly, 31(1), 71–94. https://doi.org/10.2307/3587975

Campbell, A. E., Davis, G. E., & Adams, V. M. (2007). Cognitive demands and second-language learners: A framework for analyzing mathematics instructional contexts. Mathematical Thinking and Learning, 9(1), 3–30. https://doi.org/10.1080/10986060709336603

Chiu, J. Y. (2014). Modifying dialogical strategy in asynchronous critical discussions for Cross-Strait Chinese learners. Informatics, 1, 174–189. https://doi.org/10.3390/informatics1020174

Clark, R., & Gieve, S. N. (2006). On the discursive construction of 'the Chinese learner'. Language, Culture and Curriculum, 19(1), 54–73. https://doi.org/10.1080/07908310608668754

Davidson, B., W. (1998). Comments on Dwight Atkinson's 'A critical approach to critical thinking in TESOL': A case for critical thinking in the English language classroom. TESOL Quarterly, 32(1), 119–123.

Durkin, K. (2008). The adaptation of East Asian masters students to western norms of critical thinking and argumentation in the UK. Intercultural Education, 19, 15–27. https://doi.org/10.1080/14675980701852228

Egege, S., & Kutieleh, S. (2004). Critical thinking: Teaching foreign notions to foreign students. International Education Journal, 4(4), 75–85.

Ennis, R. H. (1998). Is critical thinking culturally biased? Teaching Philosophy, 21(1), 15–33. https://doi.org/10.5840/teachphil1998211

Facione, P. A. (1990). A statement of expert consensus for purposes of educational assessment and instruction. Retrieved from http://assessment.aas.duke.edu/documents/Delphi_Report.pdf

Floyd, C. B. (2011). Critical thinking in a second language. Higher Education Research & Development, 30, 289–302. https://doi.org/10.1080/07294360.2010.501076

Fox, H. (1994). Listening to the World: Cultural Issues in Academic Writing. Urbana, IL: National Council of Teachers of English.

Grimshaw, T. (2007). Problematizing the construct of 'the Chinese learner': Insights from ethnographic research. Educational Studies,

33(3), 299–311. https://doi.org/10.1080/03055690701425643

Jin, L., & Cortazzi, M. (2006). Changing practices in Chinese cultures of learning. Language, Culture and Curriculum, 19(1), 5–20. https://doi.org/10.1080/07908310608668751

Kirby, J. R., Woodhouse, R. A., & Ma, Y. (1996). Studying in a second language: The experiences of Chinese students in Canada. In D. A. Watkins & J. B. Biggs (Eds.), The Chinese Learner: Cultural, Psychological and Contextual Influences (pp. 141–158). Hong Kong and Melbourne: Comparative Educational Research Centre and Australian Council for Educational Research.

Kumaravadivelu, B. (2008). Cultural globalization and language education. New Haven and London: Yale University Press.

Larson, A. A., Britt, M. A., & Kurby, C. A. (2009). Improving Students' Evaluation of Informal Arguments. The Journal of Experimental Education, 77, 339–366. https://doi.org/10.3200/JEXE.77.4.339-366

Larson, M., Britt, M. A., & Larson, A. A. (2004). Disfluencies in comprehending argumentative texts. Reading Psychology, 25, 205–224. https://doi.org/10.1080/02702710490489908

Li, L., & Wegerif, R. (2014). What does it mean to teach thinking in China? Challenging and developing notions of 'Confucian education'. Thinking Skills and Creativity, 11, 22–32.

Littlewood, W. (2003). Students' perception of classroom learning in East Asia and Europe. HKBU Papers in Applied Language Studies, 7, 44–63.

Liu, Z. K., He, J., & Li, B. (2015). Critical and creative thinking as learning processes at top-ranking Chinese middle schools: possibilities and required improvements. High Ability Studies, 26(1), 139–152. https://doi.org/10.1080/13598139.2015.1015501

Lun, V. M.-C., Fischer, R., & Ward, C. (2010). Exploring cultural differences in critical thinking: Is it about my thinking style or the language I speak? Learning and Individual Differences, 20, 604–616. https://doi.org/10.1016/j.lindif.2010.07.001

Mason, M. (2007). Critical Thinking and Learning. Educational Philosophy and Theory, 39(4), 339–349. https://doi.org/10.1111/j.1469-5812.2007.00343.x

Moore, T. (2004). The critical thinking debate: how general are general thinking skills? Higher Education Research & Development, 23(1), 3–18. https://doi.

org/10.1080/0729436032000168469

Norenzayan, A., Smith, E. E., Kim, B. J., & Nisbett, R. E. (2002). Cultural preferences for formal versus intuitive reasoning. Cognitive Science, 26(5), 653–684.

Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive Load Theory and Instructional Design: Recent Developments. Educational Psychologist, 38(1), 1–4. https://doi.org/10.1207/S15326985EP3801_1

Paas, F., Tuovinen, J. E., Tabbers, H., & Van Gerven, P. W. M. (2003). Cognitive Load Measurement as a Means to Advance Cognitive Load Theory. Educational Psychologist, 38(1), 63–71. https://doi.org/10.1207/S15326985EP3801_8

Paton, M. (2005). Is critical analysis foreign to Chinese students? In E. Manolo & G. Wong-Tai (Eds.), Communication Skills in university education: the international dimension (pp. 1–11). New Zealand: Pearson Education.

Robertson, M., Line, M., Jones, S., & Thomas, S. (2000). International Students, Learning Environments and Perceptions: A case study using the Delphi technique. Higher Education Research & Development, 19(1), 89–102. https://doi.org/10.1080/0729436050020499

Scriven, M., & Paul, R. (1987). Defining Critical Thinking: Critical Thinking as Defined by the National Council for Excellence in Critical Thinking, 1987. Retrieved from http://www.criticalthinking.org/pages/defining-critical-thinking/766

Shi, L. (2006). The Successors to Confucianism or a New Generation? A Questionnaire Study on Chinese Students' Culture of Learning English. Language, Culture and Curriculum, 19(1), 122–147. https://doi.org/10.1080/07908310608668758

Stephens, K. (1997). Cultural Stereotyping and Intercultural Communication: Working with Students from the People's Republic of China in the UK. Language and Education, 11(2), 113–124. https://doi.org/10.1080/09500789708666722

Ten Dam, G., & Volman, M. (2004). Critical thinking as a citizenship competence: teaching strategies. Learning and Instruction, 14, 359–379. https://doi.org/10.1016/j.learninstruc.2004.01.005

Tian, J., & Low, G. D. (2011). Critical thinking and Chinese university students: a review of the evidence. Language, Culture and Curriculum, 24,

61–76. https://doi.org/10.1080/07908318.2010.546400

Turner, Y. (2006). Chinese students in a UK business school: Hearing the student voice in reflective teaching and learning practice. Higher Education Quarterly, 60(1), 27–51. https://doi.org/10.1111/j.1468-2273.2006.00306.x

Waller, S. (2015). Cohesion is still not coherence, so what is? Teaching English in China, (6), 31–35.

Waller, S. J. (2010). Comparing the academic expectations of Chinese master's students with their actual experiences (Master's Dissertation). King's College London, London.

Wingate, U. (2012). 'Argument!' helping students understand what essay writing is about. Journal of English for Academic Purposes, 11(2), 145–154. https://doi.org/10.1016/j.jeap.2011.11.001

Wu, Q. (2015). Re-examining the 'Chinese learner': a case study of mainland Chinese students' learning experiences at British Universities. Higher Education, 70(4), 753–766. https://doi.org/10.1007/s10734-015-9865-y

AUTHOR BIOGRAPHY

Stephen Waller is an EAP tutor at University of Nottingham Ningbo. He is currently studying for a Doctorate of Education and his main research interest is the transition from Chinese to U.K. (western) education.

EMAIL
stephen.waller@nottingham.edu.cn