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Critical Thinking as Concept and Practice
in the Internationalization Strategies of Japanese Universities

Adam Gyenes

A thesis submitted in conformity with the requirements for the degree of

Doctor of Philosophy

Critical Studies in Transformative Education

Graduate School of Human Sciences

Osaka University

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adamgyenes@gmail.com

Critical Thinking as Concept and Practice in the Internationalization Strategies of Japanese Universities

Adam Gyenes

Doctor of Philosophy, Critical Studies in Transformative Education
Department of Kyosei Studies
Graduate School of Human Sciences
Osaka University

“Critical thinking is skeptical without being cynical. It is open-minded without being wishy-washy. It is analytical without being nitpicky. Critical thinking can be decisive without being stubborn, evaluative without being judgmental, and forceful without being opinionated”.

(Facione, 2015, p. 25)

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appendices)

Abstract

Critical thinking (CT) receives increasing attention in discourses around the reform and internationalization of higher education in Japan. It has become a key concept with the internationalization of universities through English Medium Instruction (EMI) programs and courses, yet is also a contested concept, and the cultural, political and sociological efficacy of teaching CT in the Japanese context has been debated since the 1990s. Seeking to shed light on the way critical thinking is conceived by different stakeholders who have a primary interest in the way that critical thinking is propagated as an educational outcome, this project employed a qualitative, multi-method design. First, critical discourse analysis (CDA) was used to look at the framing of CT within the mission statements of EMI degree programs. They were found to place emphasis on perspective taking and flexibility as essential qualities of a critical thinker, yet constructed critical thinking as a means to the end of developing students as *global jinzai* (globally-minded human resources), rather than a valued educational goal in itself. Secondly, a thematic analysis based on procedures used in constructivist grounded theory (CGT) was utilized to analyse interviews with the instructors of EMI critical thinking courses. Guidelines for course design could be developed based on their description of effective pedagogical approaches, and institutional constraints that need to be overcome. Thirdly, data from the first two studies was used to construct a q-sort, the survey instrument used in Q-methodology. Two groups of students who had completed

EMI critical thinking courses were surveyed on the attributes they considered essential to critical thinking. Factor analysis revealed four distinct views of a critical thinker, and it was possible to discern that Japanese students placed most value in flexibility, in comparison to international students who defined critical thinking in terms of logical argumentation. Combined, the findings of the three studies reveal a contested and conflicting concept that has developed particular connotations emphasising perspective taking in this socio-cultural context. However, this interpretation is understood to be particularly relevant to the growing demands for intercultural competence in Japanese higher education.

Keywords:

Critical thinking, internationalization of higher-education, Japanese universities, English medium instruction, inter-cultural communication.

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Table of contents

ABSTRACT	I
ACKNOWLEDGEMENTS	III
TABLE OF CONTENTS	V
LIST OF TABLES	IX
LIST OF FIGURES	X
LIST OF ABBREVIATIONS	XI
1. INTRODUCTION	1
1.1 BACKGROUND: CRITICAL THINKING AND JAPANESE HIGHER EDUCATION	1
CRITICAL THINKING AND EDUCATION REFORM IN JAPAN	2
KNOWLEDGE AND UNDERSTANDING	6
GENERIC SKILLS	6
ATTITUDES	6
• UNDERSTANDING MULTIPLE AND DIVERSE CULTURES.	6
• COMMUNICATION SKILLS.	6
• AUTONOMY/ SELF-MANAGEMENT.	6
CRITICAL THINKING AND INTERNATIONALIZATION	6
1.2 THE RESEARCH PROBLEM: CRITICAL THINKING AS A CONTESTED FIELD	10
1.3 RESEARCH QUESTIONS	13
1.4 PURPOSE OF THIS STUDY	15
1.5 RESEARCH DESIGN: A MULTI-METHOD QUALITATIVE APPROACH	17
1.6 POTENTIAL SIGNIFICANCE OF THIS STUDY	20
1.7 ORGANIZATION OF THE THESIS	21
2. LITERATURE REVIEW I: CRITICAL THINKING IN EDUCATIONAL PRACTICE	23
2.1 DEFINITIONS OF CRITICAL THINKING	25
FROM EARLY DEFINITIONS TO A 1980S CRITICAL THINKING MOVEMENT	25
CONSENSUS DEFINITIONS AND A 'SECOND WAVE' OF CRITICAL THINKERS IN THE 1990S	29
2.2 CRITICAL THINKING, CRITICAL PEDAGOGY, NEO-LIBERALISM AND CRITICAL AND CONSERVATIVE PHILOSOPHICAL TRADITIONS	35
SOCRATES, PLATO & ARISTOTLE ON CRITICAL THOUGHT	36
THE CONSERVATIVE TRADITION AND CRITICAL THINKING	38
THE CRITICAL TRADITION AND CRITICAL PEDAGOGY	42
CRITICAL THINKING, CRITICAL PEDAGOGY AND NEOLIBERALISM	45
2.3 CRITICAL THINKING AND EASTERN THOUGHT	48
CONFUCIUS IN THE CLASSROOM?	48
STUDENT BEHAVIOURS ATTRIBUTED TO CONFUCIANISM	52
CRITICAL THINKING AS A FILTER, CULTURE AS A SCREEN	56
2.4 CRITICAL THINKING AT JAPANESE UNIVERSITIES	58
CRITICAL THINKING AS CULTURAL THINKING	58
POLITICAL AND SOCIOLOGICAL DILEMMAS	60
2.5 APPROACHES TO THE TEACHING OF CRITICAL THINKING	62
HOW NOT TO TEACH IT	63
FOUR APPROACHES TO CURRICULUM DESIGN	65
2.6 CHAPTER SUMMARY AND IMPLICATIONS FOR THIS PROJECT	69
CRITICAL THINKING AS CONCEPT	70
CRITICAL THINKING AS PRACTICE	73
3. LITERATURE REVIEW II: THE INTERNATIONALIZATION OF HIGHER EDUCATION IN JAPAN	76

3.1	CONCEPTUALIZING THE INTERNATIONALIZATION OF HIGHER EDUCATION	78
	EMERGENCE OF INTERNATIONALIZATION AS A RESEARCH FIELD	79
	DEFINING THE SCOPE OF INTERNATIONALIZATION	81
	A CYCLICAL VIEW OF INTERNATIONALIZATION PROCESSES	84
	IMPERATIVES AND RATIONALES DRIVING INTERNATIONALIZATION	87
3.2	ECONOMIC CONDITIONS INFLUENCING INTERNATIONALIZATION IN JAPAN	89
	JAPAN'S ECONOMIC PAST AND FUTURE	89
	OVERSEAS MARKETS AND THE NEED FOR GLOBAL JINZAI	92
3.3	POLICIES SHAPING THE INTERNATIONALIZATION OF JAPANESE UNIVERSITIES	97
	FROM 10,000 TO 100,000, TO 300,000	98
	FOSTERING QUALITATIVE OUTCOMES THROUGH QUANTITATIVE TARGETS	100
	COMPETITION AND STRATIFICATION	104
3.4	CRITIQUES OF INTERNATIONALIZATION IN JAPAN	105
	CRITIQUING THE HEGEMONY OF ENGLISH AND THE WESTERN ACADEMIC MODEL	106
	CRITIQUING NATIONALISM IN THE DISCOURSE OF 'KOKUSAIKA'	110
3.5	CHAPTER SUMMARY AND IMPLICATIONS FOR THIS PROJECT	113
4.	PROJECT METHODOLOGY AND RESEARCH DESIGN	116
4.1	IDEOLOGICALLY COMPLIMENTARY QUALITATIVE METHODOLOGIES	117
4.2	ETHICAL CONSIDERATIONS	122
4.3	LIMITATIONS OF THE APPROACH	123
4.4	CHAPTER SUMMARY	125
5.	STUDY ONE METHODOLOGY: CRITICAL DISCOURSE ANALYSIS	127
5.1	UNIVERSITY MISSION STATEMENTS AND CRITICAL DISCOURSE ANALYSIS	128
5.2	SELECTION OF SAMPLE MISSION STATEMENTS	129
5.3	DEVELOPING A CRITICAL DISCOURSE ANALYSIS TOOL	132
6.	STUDY ONE: "CULTIVATING FUTURE CITIZENS" - A CRITICAL DISCOURSE ANALYSIS OF THE CONCEPT OF CRITICAL THINKING IN JAPANESE UNIVERSITY MISSION STATEMENTS	134
6.1	WHAT IS THE SOCIAL CONTEXT THAT HAS LED TO THE PRODUCTION OF THE TEXTS?	134
6.2	WHO ARE THE MISSION STATEMENTS PRODUCED BY AND FOR?	136
6.3	WHAT IS THE FUNCTION OF CRITICAL THINKING WITHIN THE NARRATIVES?	138
6.4	WHAT LEARNING OUTCOMES ARE DESCRIBED AND HOW ARE THEY ACHIEVED?	140
6.5	WHAT MEANINGS AND CONCEPTS ARE ASSOCIATED WITH CRITICAL THINKING?	141
6.6	CONCLUSION	144
7.	STUDY TWO METHODOLOGY: THEMATIC ANALYSIS INFORMED BY CONSTRUCTIVIST GROUNDED THEORY	147
7.1	CONSTRUCTING A GROUNDED THEMATIC ANALYSIS	148
7.2	INTERVIEW PARTICIPANTS	153
7.3	INTERVIEW PROCEDURE AND ANALYSIS	154
7.4	CODING OF INTERVIEW DATA	157
8.	STUDY TWO: "I THINK IT'S LIKE SWIMMING- YOU HAVE TO GET IN THE POOL" - CRITICAL THINKING CONSTRUCTED THROUGH INTERVIEWS WITH EMI COURSE INSTRUCTORS AT JAPANESE UNIVERSITIES	158
8.1	THEME 1: PERCEIVED FACTORS INFLUENCING THE DEVELOPMENT OF INTERVIEWEES OWN INTEREST IN CRITICAL THINKING	159
8.2	THEME 2: DEFINING AND DESCRIBING CRITICAL THINKING	167

8.3	THEME 3: INSTRUCTOR BELIEFS AND APPROACHES TO TEACHING CRITICAL THINKING	173
	CRITICAL THINKING AS A LEARNABLE, PRACTICAL SKILL, ACQUIRED THROUGH EXPERIENCE	173
	THE INSTRUCTOR'S ROLE IN CLASS	177
	TOPIC AND MATERIALS SELECTION	178
	ASSESSMENT STRATEGIES	182
8.4	THEME 4: STUDENT MOTIVATION TOWARD CRITICAL THINKING COURSES	185
8.5	THEME 5: OUTCOMES, OBSTACLES, AND ENABLING FACTORS	187
	BENEFITS OF CRITICAL THINKING COURSES	188
	OBSTACLES TO COURSE EFFECTIVENESS	193
	ENABLERS OF CRITICAL THINKING	200
8.6	THEME 6: THE ROLE OF CRITICAL THINKING IN JAPANESE SOCIETY	206
	A MISUNDERSTOOD CONCEPT	206
	ABSENCE OF CRITICAL THINKING IN JAPANESE EDUCATION	209
	THE USEFULNESS OF CRITICAL THINKING IN JAPANESE SOCIETY	213
8.7	COMMENTARY	215
	REVIEW OF FINDINGS	215
	COMPARISON OF FINDINGS AND INTERVIEWEE MIND-MAPS	217
	CRITICAL THINKING AND INTERCULTURAL COMMUNICATION	220
	SOCIAL CRITIQUE IN THE CRITICAL THINKING CLASSROOM	222
8.8	CONCLUSION: POTENTIAL APPROACHES FOR A CRITICAL THINKING COURSE	226
	CLASS SIZE	226
	SCHEDULING	227
	CURRICULUM INTEGRATION AND COURSE CONTENT	227
	LANGUAGE SUPPORT	228
	ASSESSMENT	229
9.	STUDY THREE METHODOLOGY: Q-METHODOLOGY	230
9.1	Q METHODOLOGY: ORIGINS AND TECHNIQUES	230
9.2	CONCOURSE AND Q-SAMPLE SELECTION	234
9.3	PARTICIPANT GROUPS	237
9.4	BLURRED LINES	239
10.	STUDY THREE: PERCEPTIONS OF CRITICAL THINKING AMONG INTERNATIONAL AND DOMESTIC STUDENTS AT JAPANESE UNIVERSITIES - A Q-METHODOLOGY STUDY	242
10.1	ANALYSIS PROCEDURE	242
10.2	FOUR DISTINCT VIEWS OF CRITICAL THINKING	245
	FACTOR 1: FLEXIBLE AND MULTICULTURAL THINKERS	246
	FACTOR TWO: INDEPENDENT EVALUATORS OF EVIDENCE	249
	FACTOR THREE: INQUISITIVE AND INNOVATIVE	252
	FACTOR FOUR: BALANCED, FLEXIBLE EVALUATORS	255
10.3	DISCUSSION	257
	POSSIBLE EXPLANATIONS	260
10.4	CONCLUSION	264
11.	EXECUTIVE FINDINGS AND CONCLUSION	266
1.	WHAT IS THE IMPETUS FOR THE MEXT'S INTEREST IN CRITICAL THINKING, AND HOW HAS IT BEEN FRAMED IN THEIR EDUCATION POLICIES?	266
2.	HOW IS THE CONCEPT OF CRITICAL THINKING FRAMED BY COURSE ADMINISTRATORS, AND WHAT ROLE DOES IT PLAY IN CONSTRUCTING THE IDENTITY OF UNDERGRADUATE, EMI DEGREE PROGRAMS?	267

3. HOW DO INSTRUCTORS OF ENGLISH MEDIUM CRITICAL THINKING COURSES AT JAPANESE UNIVERSITIES, CONCEPTUALIZE CRITICAL THINKING AND HOW IS THEIR UNDERSTANDING MANIFESTED IN THEIR TEACHING PRACTICES?	
268	
4. HOW DO STUDENTS IN EMI PROGRAMS CONCEIVE AND PERCEIVE THE IMPORTANCE OF BEING A CRITICAL THINKER?	269
POINTS OF COMPARISON BETWEEN THE THREE STUDIES	270
5. TO WHAT EXTENT ARE THE MEXT'S AMBITIONS FOR PROMOTING CT BEING ACHIEVED THROUGH EMI PROGRAMS?	271
12. EVALUATION	274
REFERENCES	277
APPENDIX 1: SIX UNIVERSITY MISSION STATEMENTS	293
APPENDIX 2: INTERVIEW PARTICIPANT LIST	297
APPENDIX 3: FACTOR ARRAYS AND Z-SCORES FOR EACH STATEMENT	298
APPENDIX 4: Q-SORT FACTOR LOADINGS FOR 39 STUDENT PARTICIPANTS	300
APPENDIX 5: INFORMATION AND CONSENT DOCUMENT PROVIDED INTERVIEWEES PARTICIPATING IN STAGE 2 OF THIS RESEARCH	302
APPENDIX 6: INFORMATION AND CONSENT DOCUMENT PROVIDED SURVEY PARTICIPANTS IN STAGE 3 OF THIS RESEARCH	303
APPENDIX 7: CODEBOOK SHOWING CODES, CATEGORIES, AND THEMES USED TO ANALYSE INTERVIEW DATA IN STUDY TWO.	304
APPENDIX 8: MIND-MAPS COLLECTED FROM INTERVIEWEES IN STUDY TWO.	318

List of Tables

Table 5.1. Web search results using different Japanese search terms for critical thinking.

Table 8.1 Selected mind-map comments and related interview themes.

Table 10.1. Eigenvalues and explained variance in factor extraction.

Table 10.2. Correlations between factor scores

Table 10.3. Distinguishing statements for factor 1 by factor array and z-score.

Table 10.4. Distinguishing statements for factor 2 by factor array and z-score.

Table 10.5. Distinguishing statements for factor 3 by factor array and z-score.

Table 10.6. Distinguishing statements for factor 4 by factor array and z-score.

Table 10.7. Breakdown of universities students belonged to, nationalities and genders across four factors.

List of Figures

- Figure 1.1** Bloom's taxonomy model revised after Anderson and Krathwohl (2001) combining knowledge and cognitive process dimensions
- Figure 1.2** Competencies involved in *gakushi-ryoku*.
- Figure 1.3** International student enrolment in Japan.
- Figure 1.4** Cultural and philosophical views contesting the field of EMI critical thinking in Japanese Universities.
- Figure 1.5** Five core research questions.
- Figure 1.6** Map of research questions, stakeholders, methodology and data sources.
- Figure 2.1** A visualization of Scriven & Paul's (1996) definition of critical thinking.
- Figure 2.2.** Intellectual Standards used in critical thinking guides published by the Foundation for Critical Thinking.
- Figure 2.3.** Illustration of the allegory of the cave from Plato's Republic, Book VI.
- Figure 3.1** Jane Knight's (1994) Internationalization Cycle.
- Figure 3.2** Phillips and Ochhs four stages of Policy Borrowing in Education.
- Figure 3.3** Historical GDP growth of Japan, 1961-2015.
- Figure 3.4** Japan's projected population by age group.
- Figure 3.5** Countries ranked by GDP prediction in 2025 and 2050.
- Figure 3.6** Effective barriers to the establishment of overseas businesses.
- Figure 3.7** Number of Japanese students enrolled in study abroad programs overseas.
- Figure 3.8** Attitudes toward foreign countries among Japanese, aged 20-30.
- Figure 5.1.** Critical Discourse Analysis tool in relation to Fairclough's 3-dimensional.
- Figure 6.1.** Word cloud generated from the texts of six mission statements.
- Figure 7.1.** List of questions used in semi-structured interviews.
- Figure 8.1.** Interview excerpts and initial codes: critical thinking through educational experiences.
- Figure 8.2.** Interview excerpts and initial codes: critical thinking through non-educational experiences.
- Figure 8.3.** Categories and codes used to construct theme one: Factors influencing development of instructor's own critical thinking.
- Figure 8.4.** Pie chart showing twelve elements of critical thinking identified in the data.
- Figure 8.5.** Utilization of conflicting ideologies in teaching practice.
- Figure 9.1.** Illustration of participant engaged in arranging a q-sort on a grid.
- Figure 9.2.** Example of a q-sort grid upon which statements (on cards) are ranked.
- Figure 10.1.** Scree plot showing eigenvalues for factor extractions.
- Figure 10.2.** Composite Q-sort for factor 1.
- Figure 10.3.** Composite Q-sort for factor 2.
- Figure 10.4.** Composite Q-sort for factor 3.
- Figure 10.5.** Composite Q-sort for factor 4.

List of Abbreviations

<u>Abbreviation</u>	<u>Term</u>
CT	Critical Thinking
CDA	Critical Discourse Analysis
CGT	Constructivist Grounded Theory
EMI	English Medium Instruction
G30	Global 30 project
MEXT	Ministry of Education, Culture, Sports, Science and Technology
TGU	Top Global University

Critical Thinking as Concept and Practice in the Internationalization Strategies of Japanese Universities

1. Introduction

This opening chapter describes the social drivers that have given critical thinking prominence as a key concept in Japanese higher education while it is in a process of being reshaped by internationalization, and highlights some of the issues and paradoxes arising from this. Research questions, aim and scope are delineated; the theoretical framework guiding the research design and the significance of the work are discussed, and chapter organization is outlined.

1.1 Background: Critical Thinking and Japanese Higher Education

Critical thinking (CT) is a topic of frequent discussion around secondary and higher education in Japan, and is strongly linked with two major trends that have been reshaping Japanese education since the cusp of the twentieth century. The first is a re-conceptualization of academic ability: a shift since the 1990s away from the traditional understanding of academic achievement in terms of *gaku-ryoku* (literally ‘study strength’, or learning capacity) toward a holistic focus on ‘21st century skills’. The second is a drive to internationalize Japanese higher education that has seen the number of international students studying in Japan greatly increase, facilitated in large part by the use of English as the means of instruction (EMI) in programs at a select group of the nation’s leading national

and private universities. CT has become an important concept in discourse surrounding both of these trends, and an important element of the education that they seek to promote.

Critical thinking and education reform in Japan

Critical thinking, to use the definition endorsed by the Critical Thinking Foundation (an organization established by a group of scholars in California in the 1990's) is understood as:

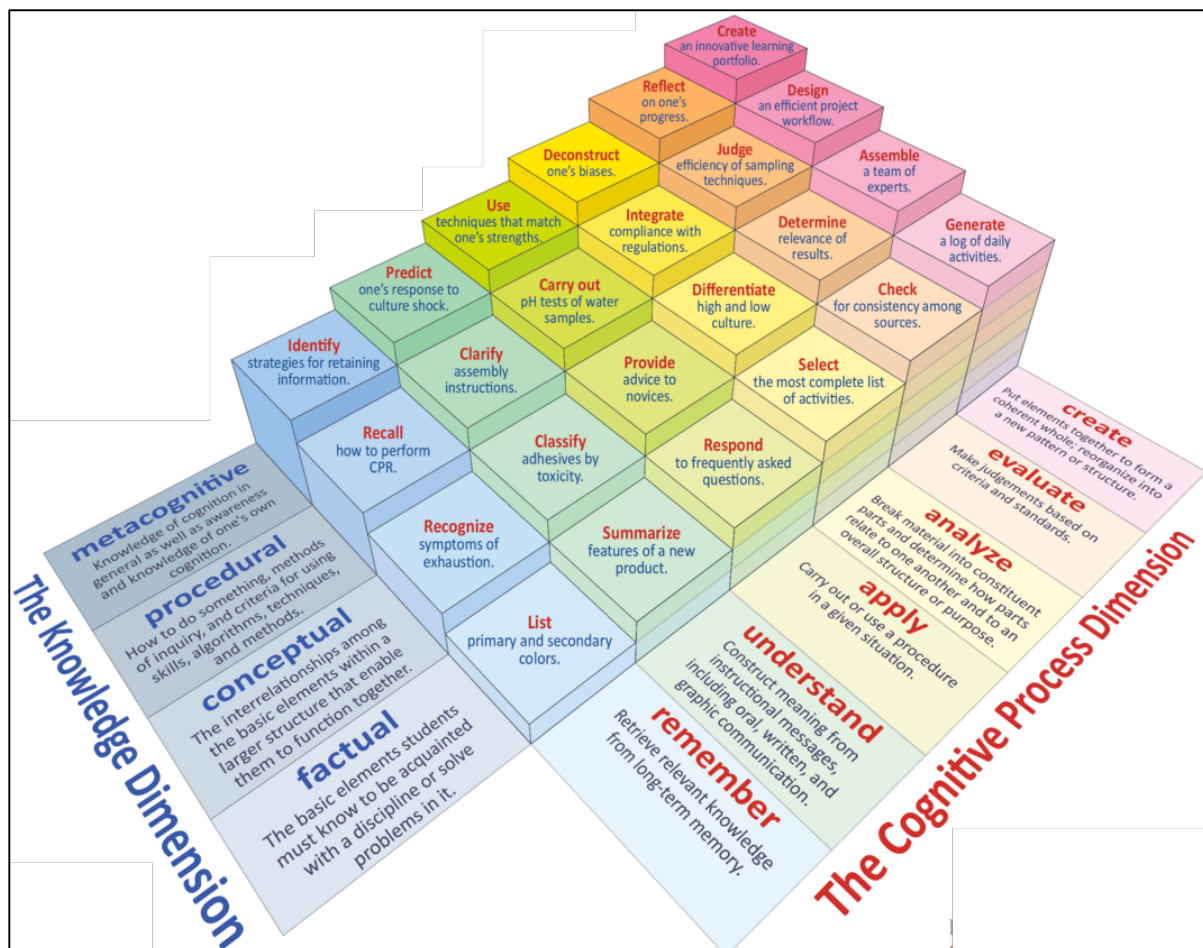
The intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. (Scriven & Paul, 1996)

This definition, highlights five skills as the core elements of critical thinking (conceptualizing, applying, analysing, synthesizing, and evaluating), which occurs when they are used in an 'intellectually disciplined process'. Similar skills are also described as cognitive processes in Bloom's taxonomy (revised in 2001), another key text influencing education reform discourse in Japan and elsewhere. (Anderson & Krathwohl, 2001; see figure 1.1). In the taxonomy, evaluating and analysing are placed above applying, understanding and remembering as higher-order thinking skills ('create', at the highest level, did not feature in the original taxonomy and was added with the revisions made in 2001). Growing interest in development of higher-order thinking skills in general, and critical thinking in particular, had developed out of education reforms taking place in the United States during the 1980s and 90s, sparked by the response to a perceived crisis in post-secondary education under the

Reagan administration (Gardner *et al*, 1983; Dinkelman,1990), which lead to a more holistic pedagogical focus on skills. This had no doubt influenced the education reform discourse in Japan, which has itself been shaped by a neoliberal political agenda since the turn of the century (Goodman, 2005, pp. 1-31), and the competencies described in directives published by Japan's Ministry of Education, Culture, Sports, Science and Technology (the MEXT) clearly reference a need to foster critical thinking and higher-order thinking skills.

Figure 1.1 Bloom's taxonomy model revised after Anderson and Krathwohl (2001)

combining knowledge and cognitive process dimensions.



(Model created by: Rex Heer Iowa State University Center for Excellence in Learning and Teaching, Updated January, 2012 Licensed under a Creative Commons Attribution Non-Commercial-Share Alike 3.0 Unported License)

Yet these are also skills that are considered to have been grossly neglected by the Japanese education system in the past, which has favoured teacher-centred classroom practices, and a culture of testing, with little attention given to thinking skills other than those connected with remembering and understanding (McVeigh, 2002, pp. 96-120). Under these circumstances the dominant conception of academic achievement in Japan has been *gaku-ryoku*; a measure emphasizing memorization, speed and endurance (Yamamoto et al., 2016, p. 43), as quantified through scores on the standardized tests which are used in calculating *hensachi* (偏差値); the “abstract notion of a national norm-referenced person-indexed score” (Brown, 1995, p. 25). In the past, *gaku-ryoku* was the predominant determiner of the universities students could expect to enter and therefore held a major influence over the path their lives might take thereafter. Students who attended ‘good’ universities were perceived to have high *gaku-ryoku*, and those who did not, were not. However, while value continues to be placed in *gaku-ryoku*, a steady stream of reform documents published by the MEXT since the 1990’s have pointed to a new, holistic focus on 21st century learner competencies.

Beginning in the late 1990’s with the concept of *ikiru-chikara* (Central Council of Education, 1996), the MEXT has attempted to delineate and disseminate the skills that educators at all levels should strive to develop in their students, and while critical thinking may not be explicitly mentioned, it would be difficult to find a single descriptor that is a better summation of what is expressed. *Ikiru-chikara* (translated by the MEXT as ‘zest for living’) states that students must be ‘driven by a propensity to actively seek out tasks independently; learn, think, act, and solve problems with their own resources’ (translated in Yamamoto et al., p .52).

In 2008, the idea of *gakushi-ryoku* was introduced, meaning ‘graduate attributes’; the learning outcomes to be expected of an undergraduate degree program (Central Council of Education, 2008). This was an officially published decree for universities to review their curriculum and diploma policies, driven by a demand for capable human resources from the business community. The Ministry of Economy, Trade and Industry (METI) had two years previously issued its own guideline of the ‘fundamental competencies for working persons’ (*shakaijin kisoryoku*), with the aim of putting pressure on universities to deliver graduates better able to adapt to the professional arena (Ministry of Economy, Trade and Industry, 2006).

Gakushi-ryoku has served as a catalyst for universities to reflect upon and review their pedagogical aims and practices, and is also the basis upon which the central test for university admissions (*center shiken*) is currently in a process of being revamped (Central Council of Education, 2015). Included among the 12 competencies that encapsulate *gakushi-ryoku* are ‘understanding multiple and diverse cultures, logical thinking, problem-solving skills, autonomy, self-management, and a sense of ethics’; all of which require critical thinking. The arrangement of these competencies across three categories of knowledge, skills and attitudes, mirrors the understanding of critical thinking being dependent on a critical disposition; an attitude that needs to be fostered in order to use skills and knowledge in an intellectually disciplined way.

Figure 1.2 Competencies involved in *gakushi-ryoku*. (Source: Yamamoto et al, 2016, p. 53; adapted and translated from Central Council, 2008)

Knowledge and understanding	Generic skills	Attitudes
<ul style="list-style-type: none"> • Understanding multiple and diverse cultures. • Knowledge and understanding of culture, society and nature. 	<ul style="list-style-type: none"> • Communication skills. • Quantitative data handling skills. • Information literacy. • Logical thinking. • Problem-solving skills. 	<ul style="list-style-type: none"> • Autonomy/ Self-management. • Teamwork and leadership. • A sense of ethics. • Societal responsibility as a citizen. • Life-long learning.

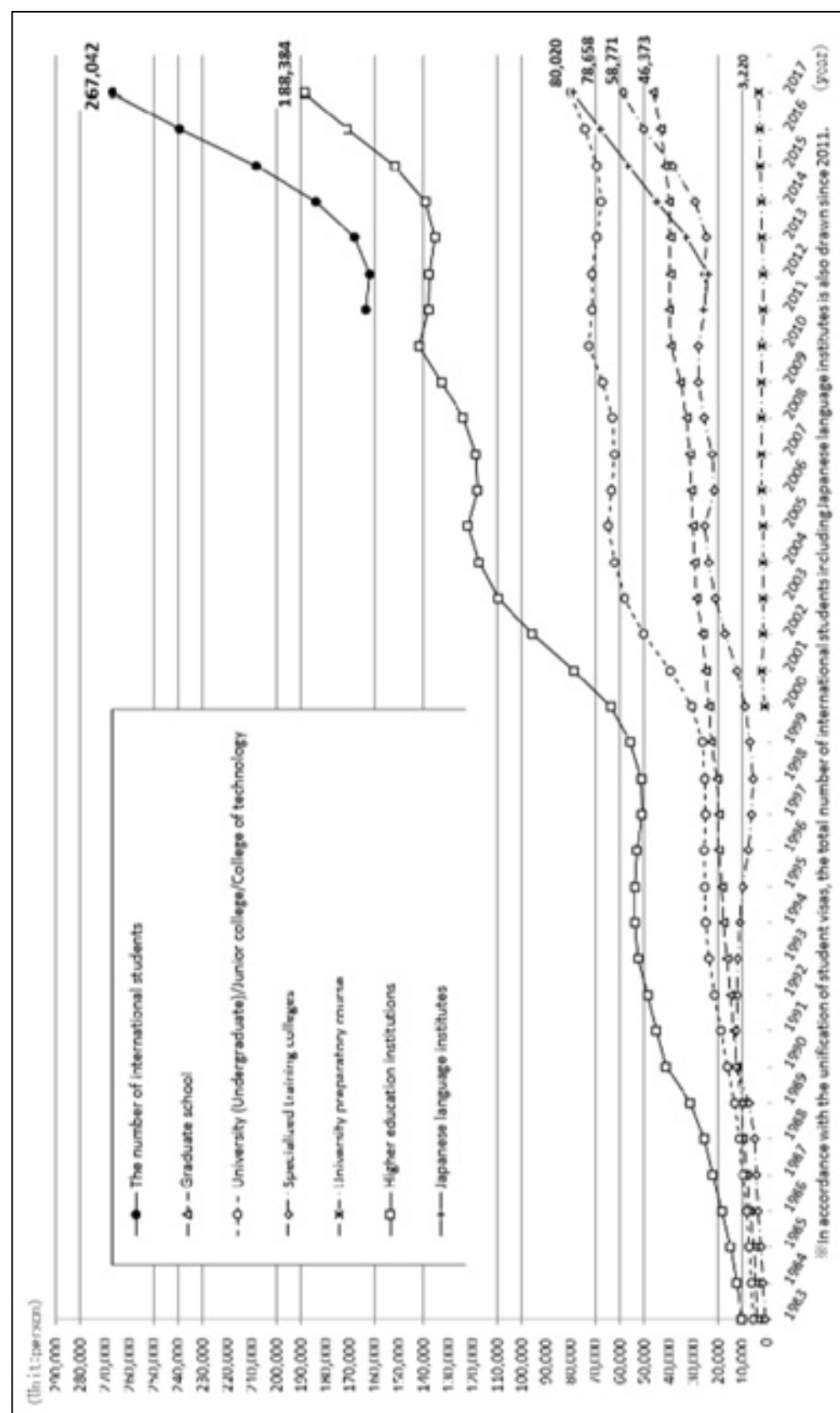
Critical thinking and internationalization

The second major trend is a concurrent drive to internationalize Japanese universities, which has resulted in a proliferation of degree programs taught in English at select institutions, funded by the MEXT through the ‘G30’ and ‘Top Global University’ projects. The G30 project established English Medium Instruction (EMI) degree programs at 13 elite national and private universities and was superseded in 2014 by the Top Global University Project, which has expanded funding for broader internationalization initiatives at 37 universities classified into ‘Type A (Top Type) universities that are conducting world-leading education and research’ and ‘Type B (Global Traction Type) universities that are leading the globalization of Japanese society’ (“Top Global University Project Outline”, 2017).

A main objective of this internationalization drive has been to facilitate the growth of international student numbers on Japanese university campuses, with the ambitious target of having 300,000 international students enrolled in programs at Japanese universities annually by 2020 (ICEF, 2018). Whether the target can be met by that time (coinciding with the Tokyo Olympic games) seems unlikely, and Japanese language institutes, mostly used by those *in preparation* for university entrance, have been included in calculations since 2011 in a perhaps cynical attempt to bolster the numbers (see figure 1.3). Notwithstanding this, the number of international students enrolled in higher education institutions has clearly appreciated exponentially since the turn of the century, accelerating since the inception of the G30 project in 2009.

Yet diversification of the student body on Japanese university campuses is not merely an end in itself, but part of ‘a realization that more diverse, more transnational campuses do much to further the mission of a university’ (Poole, 2016, p. 210). These programs simultaneously aim to nurture Japanese students as so called *global jinzai* (‘globally-minded human resources’), who are capable of innovating and leading Japanese businesses in the globalized economy of the 21st century. Such developments have been eulogized by those educators in Japan, who for a long time have bemoaned Japanese student’s inadequacies -ranging from their poor English ability to their declining interest in study abroad- and connect a lack of global perspective to being: ‘unskilled at using a logical and objective method to independently form their own opinions’ (Kawato, 2012).

Figure 1.3 International student enrolment in Japan, 1983-2017. (Source: JASSO, qtd. In ICEF, 2018)



The concept of critical thinking is thus closely linked with both of these trends: it is the nexus of the 21st century competencies listed as *gakushi-ryoku*, that are required by the *global jinzai* that the internationalization drive aims to foster. Furthermore, the development of critical thinking skills is stated as a major pedagogical aim of many of the EMI degree programs created to meet the demand for internationalization. It features prominently in the mission statements of these schools, as a key selling point for programs, to show that they do more than just teach in English. Within these programs, critical thinking courses, and other courses that aim to develop critical thinking are taught, often by Western instructors and using English as a means of instruction, to develop their student's global knowledge, skills and attitudes.

Yet critical thinking is a problematic concept in itself, for while it pertains to a quest for 'truth', 'objectivity', 'reason' or 'knowledge', it is also a socially constructed concept; and the truths and objectivities it reveals shift as they are framed by different socio-cultural perspectives (Gallo, 1994, p. 43). It is a concept that has been constructed by an Anglo-American academic culture, but what it means to think critically can have different connotations in other cultures, and how 'criticality' is performed or displayed by students in non-Western academic settings may differ from the Western model. Indeed, there are those who have questioned whether it is valid to teach critical thinking in Asian cultural settings, where Confucian concepts of group harmony and hierarchical relationships frame the cultural schemata (Atkinson, 1997); or if the way it is approached requires some adaption or appropriation by Asian cultures (Yoneyama, 2012). While these misgivings remain unresolved for many working in the field, critical thinking has been placed on the agenda by the government and business community and attached to internationalism as the

trait necessary to develop and distinguish the new, globally-minded elite class of *global jinzai*.

1.2 The Research Problem: Critical Thinking as a Contested Field

Furthermore, there are other issues arising from the conflation of critical thinking with internationalization in Japan. On the one hand, CT possesses a singular meaning at its core; it is the very nucleus of many of the so called 21st century skills required by *global jinzai*. On the other, the phrase is used superficially and arbitrarily: an umbrella term under which perceived deficiencies in Japanese education are amalgamated, and solutions to these problems are marketed. While the superficial use of critical thinking as a buzzword is not something exclusive to the Japanese context (Clegg, 2008), in Japan it has assumed particular connotations and symbolic value: CT has become what the anthropologist Victor Turner defined as a ‘multi-vocal symbol’:

The multi-vocal symbol is composed of: 1. A symbol vehicle which is iconic in that at least one of its sensory perceptible characteristics can be readily associated with at least one of its denotations ... 2. A set of denotations or primary meanings- not usually a single denotation; 3. A set of designations or connotations implied in addition to the primary meaning of the symbol. (Turner, 1969, p. 451)

Critical thinking has taken on this iconic status. Beyond denoting sceptical, logical, balanced or reflective thought (primary meanings), discourse in Japan invokes the image of an internationally-minded, culturally aware, professionally talented elite (implied

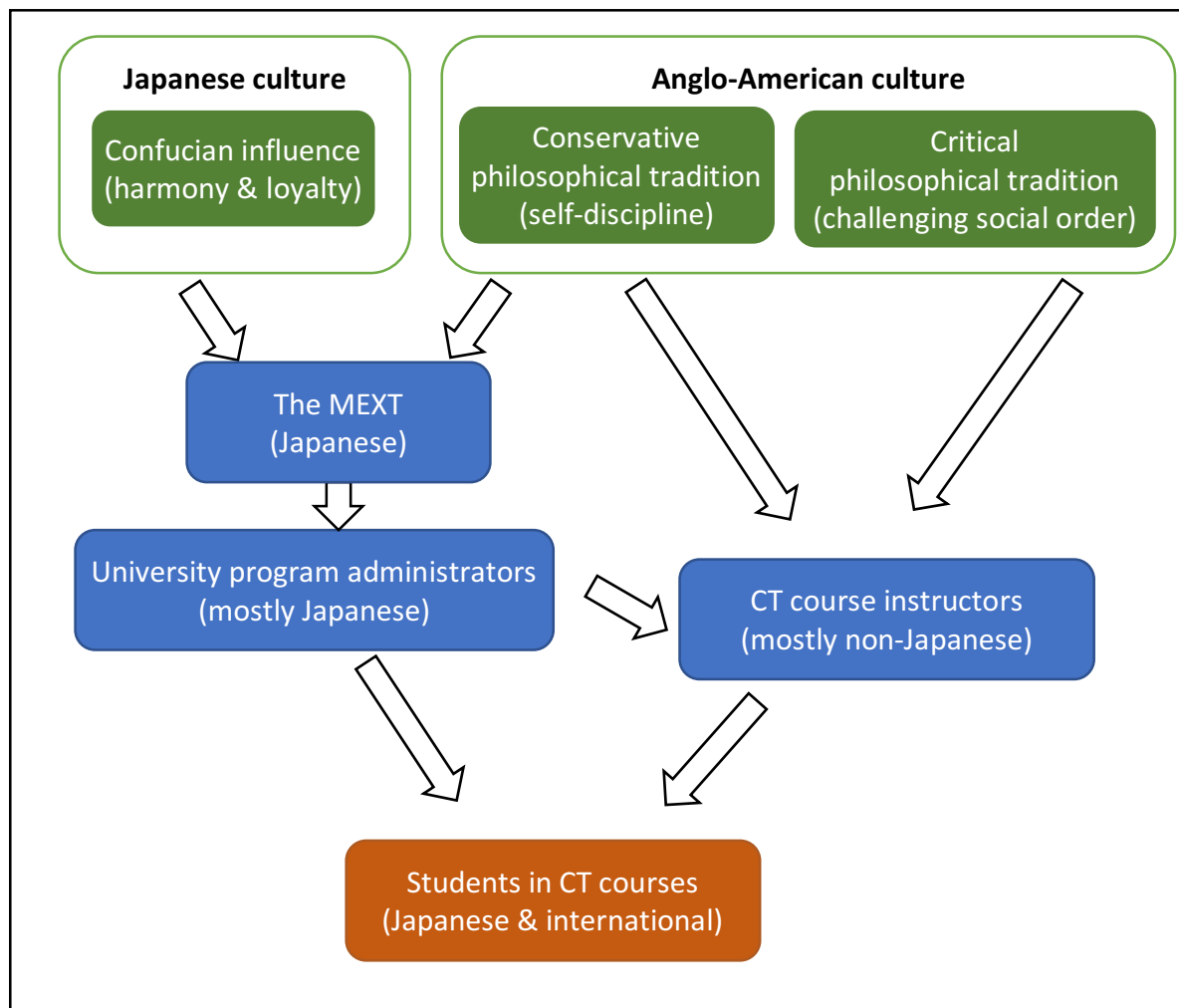
connotations). Yet the values that underlie the discourse and the process by which this understanding has been constructed needs to be analysed, if all of its implications are to be understood.

Equally, approaches to CT may vary even among the mostly Western instructors who have been tasked with teaching it. Though a variety of EMI courses might aim to develop CT, those who teach them have often had no explicit instruction in it, or in approaches to teaching it, and have needed to form their own understanding. These understandings may have been formed with an awareness of literature produced by the critical thinking movement (such as critical thinking textbooks), or may have developed with different philosophical underpinnings, for while the term 'critical thinking' was coined in the twentieth century (Glaser, 1941), as a concept it can be traced back to the origins Western civilization, beginning with classical philosophy, and Socrates' allegory of 'the cave and the light', as described in Plato's *Republic*. The philosopher attempts to transcend the imperfections of the real world (the cave in which all that can be seen are reflected shadows) in order to see true forms, through questioning the nature of reality (2016, pp. 192-7). Aristotle's laws of reasoning, which describe the formation of concepts, judgements and arguments as the basis of logical thought (1963, pp. 35-56), provide another starting point. Out of these origins, two understandings of the purpose of critical thought have developed in Western philosophy: a liberal critical tradition, beginning with Socrates and Plato, and to which enlightenment philosophers such as Rousseau and Kant also belong; for whom the object of critique is to challenge the social order. On the other side, Aristotle is the progenitor to a conservative philosophical tradition furthered by Thomas Aquinas, Descartes, Locke, Hume, and John Start Mill, for whom the aim of critique is to sharpen

one's own thought. The proponents of the critical thinking movement in the twentieth century, as is clear from the Scriven and Paul definition, have aligned CT with this conservative tradition, with their version of a critical thinker as 'something like a critical consumer of information' (Burbules & Berk, 1999, p. 5). Yet those teaching critical thinking at Japanese universities do not necessarily have the same understanding of it, and may in fact see the purpose of critical thinking as the development of a critical social consciousness akin to that found in Paulo Freire's critical pedagogy. For Freire: 'Men relate to their world in a critical way ... Integration results from the capacity to adapt oneself to reality plus the critical capacity to make choices and to transform that reality' (Freire, 2013, pp. 3-4). Thus, a critical thinker cannot be an onlooker or bystander, and the educator's aim is to raise the consciousness of their students, in order to empower them to change their reality. On the other hand, it is the fact that CT has been situated within the conservative tradition that allowed it to be born of neo-liberal reforms in the United States, and in Japan, makes it palpable to the interests of government and business, who want students to be developed as self-disciplined business leaders, not as iconoclasts.

The effect is that differing cultural viewpoints, and ambiguous, multifarious and conflicting understandings of CT shape a contested field, and the education that students receive within it (see figure1.4). Furthermore, because EMI programs are made up of both Japanese and international students, they bring their own cultural and educational experiences into the classroom, where they also have some agency in shaping each other's understandings of CT, while the competing ideologies in the field attempt to affect them.

Figure 1.4 Cultural and philosophical views contesting the field of critical thinking in EMI programs in Japanese Universities.



1.3 Research Questions

With an interest in understanding the conceptualization of critical thinking in this contested field, and investigating the educational practices by which CT is promoted, this study explores the concept of critical thinking from the viewpoint of each of the primary stakeholders within undergraduate EMI degree programs: program administrators, course instructors and students. It is interested in how they each view the meaning of CT, where their understandings come from, and to what extent their viewpoints overlap and affect one

another. Ultimately it is interested in how successfully the purposes for the MEXT's reform and internationalization policies are supported by the educational initiatives taking place within EMI programs, and how students are affected by these outcomes.

The main research concerns of this project can therefore be summarized in and guided by five core research questions, which are listed in figure 1.5 below:

Figure 1.5 Core research questions

- I. What is the impetus for the MEXT's interest in critical thinking, and how has it been framed in their education policies?
- II. How is the concept of critical thinking framed by course administrators, and what role does it play in constructing the identity of undergraduate, EMI degree programs?
- III. How do instructors of English medium critical thinking courses at Japanese universities, conceptualize critical thinking and how is their understanding manifested in their teaching practices?
- IV. How do students in EMI programs conceive and perceive the importance of being a critical thinker?
- V. To what extent are the MEXT's ambitions for promoting CT being achieved through EMI programs?

The first of these questions has already been answered to some extent at the beginning of this chapter, and will be examined more deeply in chapter 3, through a review

of literature related to the internationalization of higher education in Japan. Questions II-IV consider the importance of critical thinking from the perspective of each of the primary stakeholders: administrators, educators and students. Each of these questions is related to a specific stage of the research design, as shall be explained later in this chapter. Question V has a broader interest that is informed by the research as a whole.

1.4 Purpose of this Study

Interested primarily in an empirical, qualitative understanding of concepts and practices, the aim of this study is not the measurement of the critical faculties of Japanese students or evaluation of the effectiveness of individual courses or programs in developing these faculties. Although several tests exist to assess and quantify critical thinking abilities including the California Critical Thinking Skills Test (Facione, 1990), the Cornell Critical Thinking Test (Ennis & Millman, 2005), the Ennis-Weir Critical Thinking Essay Test (Ennis & Weir, 1989), and the Watson-Glaser Critical Thinking Appraisal (Watson & Glaser, 2002), it has also been noted that these tests vary widely in their methods and formats, from multiple-choice to essay based assessments (Ku, 2009) and the validity and reliability of some of these instruments has been called into question (Silva, 2008). Furthermore, several of those who have attempted to use such tests in a Japanese context have been critical of their cultural and linguistic validity outside of an Anglo-American context (Sybing, 2017). Others have sought to translate and adapt these tests (Hirayama, Tanaka, Kawasaki & Kusumi, 2010) or developed their own rubrics and tools (Hirayama & Kusumi, 2004). While there is potential for further quantitative work to make a contribution in this area, less work

has been done to explore how CT is interpreted, rather than how it is performed or evaluated, for which purposes a qualitative approach is more suited.

This study is also wary of taking a pre-existing theoretical understanding of critical thinking from a Western context, and using it as a base from which to approach and pass judgement over critical thinking in a Japanese context. While established definitions of CT have been shaped over time, and knowledge of these definitions and how they have developed is essential to take an informed view, evaluating the understanding of CT in Japan against a pre-conceived ideal of how CT should be understood or taught would be to view from one fixed subjective position. The subject of this study itself -critical thinking- is a process of 'thinking about your thinking while you're thinking in order to make your thinking better' (Paul, qtd. in Dwyer, 2017, p. 57). In this spirit, the aim here is to be aware of and reflexive to the subjectivity of the research, in order to approach the research problem critically, and understand it from more than one point of view, bringing the views of stakeholders in Japanese higher education to the foreground.

This study therefore seeks to contribute to a qualitative understanding of critical thinking as a social phenomenon and contested concept in the Japanese educational environment. The aim is to focus on the tertiary sector, and understand how conceptions of CT are actualized within it. It is interested in how these conceptions are socially constructed within a contested field, from the subjective viewpoint of each primary stakeholder. Through analysis of these viewpoints, an understanding emerges of how government policies trickle down, and educators shape change from the ground up, and how between them they affect the educational outcomes for students.

1.5 Research Design: A Multi-Method Qualitative Approach

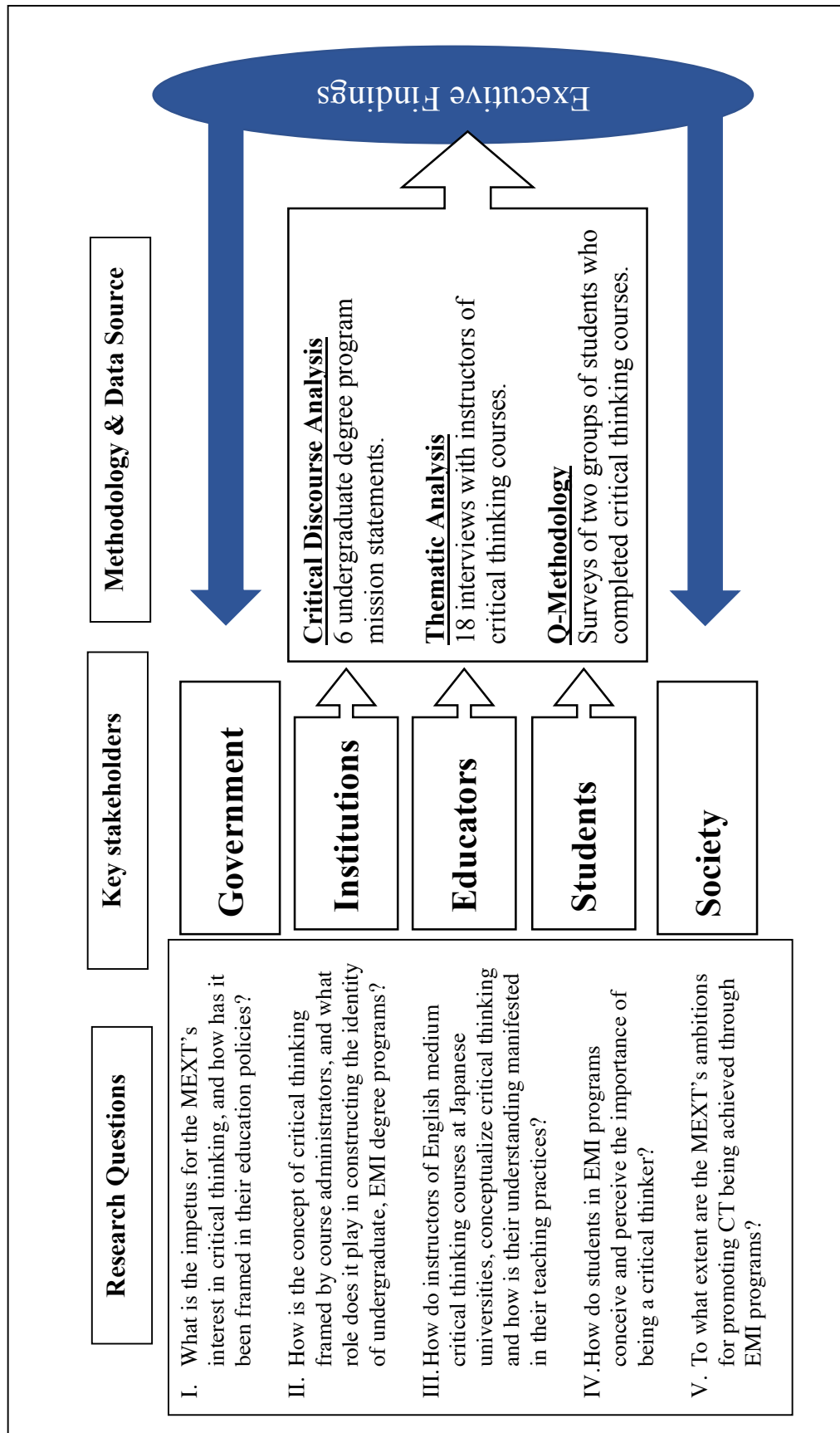
This research employs a qualitative, multi-method research design. Distinct from mixed methods research, which integrates quantitative and qualitative data gathering techniques, multi-method research can combine two research methods (or more) that are both quantitative or both qualitative. In this case, with an interest in the subjective viewpoints of three primary stakeholders (institutions, educators and students), three different qualitative approaches have been used to suit the different type of data gathered from each source: the mission statements of EMI degree programs, transcripts of interviews with educators who teach critical thinking courses, and surveys of students who participated in critical thinking courses.

The rationale for a mixed methods research design would be to triangulate (Tashakkori & Teddlie, 2003, p. 10): to counterbalance the limitations of a singular quantitative or qualitative approach, and gain new analytical insights from doing so. Similarly, with a qualitative, multi-method design, the aim is not only to underpin the validity of evidence presented, but also to discover richer themes and viewpoints on the phenomena; to include a plurality of facets within one research project (Johnson, 2014, p. 118). Utilizing a different analysis method for each data source allows the research problem to be viewed through multiple analytical lenses. Ultimately, the aim is to conduct research that is reflexive to how findings are framed by different methodologies; to explore the complexity of the research problem and develop executive findings that speak not only for each of the primary stakeholders, but which allow broader questions to be addressed.

For each data source a different analytical tool is employed, drawing from different, yet ideologically compatible research methodologies. Critical discourse analysis (CDA), based on the methods of Fairclough (2003, 2010), is used to analyse how critical thinking is framed in the mission statements of six undergraduate EMI degree programs. A thematic analysis based on procedures used in constructivist grounded theory (Charmaz, 2014) is applied to the transcripts of semi-structured interviews which were conducted with 17 instructors of critical thinking courses or other courses with a strong focus on critical thinking at Japanese universities. Finally, 32 statements taken from both the interviews and mission statements were used to create a 'q-sort', the survey instrument used in q-methodology (Stephenson, 1935). The survey was given to two groups of undergraduate students at two Japanese universities, both of whom had participated in EMI critical thinking courses. In this way, data from the first two parts of the research is evaluated by students in the third, and while three different analytical tools are used in the project, the data gathered from each source is interconnected.

A detailed description of the rationale for a multi-method approach, each methodology and details of their implementation is provided in chapter 4 and in the subsequent chapters that detail each of the three studies. Figure 1.6 shows how research questions, stakeholders in higher education, methodologies and the data sources used in this study are linked to one another:

Figure 1.6 Map of research questions, stakeholders, methodologies and data sources used in this study.



1.6 Potential Significance of this Study

The findings of this research are of relevance to those concerned with university education in Japan, for a number of reasons. If internationalization is to play a larger role in the higher education sector in Japan in the future, it can be expected that the pursuit of critical thinking as an educational outcome in tandem with this will continue to grow too (or at least it will not go away). An appreciation of why this is so, and what critical thinking means from different perspectives within Japanese universities is of importance to those tasked with writing the mission statements, designing curricula and syllabi, teaching and assessing courses, and also for those who seek to graduate from the programs. Therefore, it is first of all hoped that this research will be a useful guide, to help clarify much of the ambiguity around critical thinking for the primary stakeholders who are also the subjects of this study: students, educators and institutional decision makers.

Furthermore, by charting the ways in which a contested pedagogical concept is affected by different philosophical and cultural positions, and resulting outcomes, this research can be insightful to those looking at other areas of Japanese education in which similarly contested concepts exist. Internationalization has itself been identified as such a contested concept in Japan (Goodman, 2007; Burgess *et al.*, 2010), and within the same sphere, EMI, the use of English as a lingua franca, and global citizenship education are examples of other areas where different perspectives and interests contest the meaning of the concept and could become a cause of conflict.

Finally, it is hoped that this research also provides some stimulus to reconsider the meaning of critical thinking, its purposes and its cultural transferability. The critical thinking movement that emerged in the United States in the 1980s and 90s, developed definitions of critical thinking that are supposedly universally applicable, yet arguably did so without giving consideration to an inter-cultural dimension. The Delphi Report (Facione, 1990), for example, sought to create a consensus definition and guidelines for critical thinking education by the combined effort of a 46-member expert panel, that met six times between 1988 and 1990. However, every one of these experts had been gathered from universities in the United States (p. 35). The 'International Conference on Critical Thinking', annually organized by the Critical Thinking Foundation since 1980, was held outside of the United States for the first and only time in 2019 (Foundation for Critical Thinking, 2018). As interest in critical thinking continues to grow internationally, there is a need for the intercultural dimensions of critical thinking to be discussed.

1.7 Organization of the Thesis

The research broadly described here is organized over twelve chapters. The next two chapters provide a detailed review of the two areas of literature most relevant to this thesis. Chapter two examines literature related to conceptions of critical thinking. It covers the emergence of definitions of critical thinking in education in the 20th century, the philosophical underpinnings of those theories, and discussion of critical thinking in relation to the Japanese context. Chapter three covers Literature related to the internationalization of Education in Japan, and building on the discussion of education reforms at the beginning of this chapter, provides answers for the first core research question: 'What is the impetus

for the MEXT's interest in critical thinking, and how has it been framed in their education policies'?

Chapter four provides an overview of the multi-method research design, discussing the theoretical compatibility of the methods used, and their respective relevance, rationale, limitations and ethical considerations. The methodology and techniques used in each of the three studies is described in detail in subsequent individual chapters. Chapter five details the methods used in the critical discourse analysis of mission statements, and findings are presented in chapter six. Chapter seven and eight present the methodology and findings of study two: a constructivist grounded theory developed from the analysis of interviews with course instructors. The methodology and findings of study three, which uses Q-methodology to survey two student groups, are presented in chapters nine and ten.

A comparison of exclusive findings from all three parts of the research is made in Chapter eleven, in which executive findings, related to questions one and five of the core research questions are also discussed. Chapter twelve reflects upon, evaluates, and concludes this research, considers the significance of the presented findings, and makes recommendations for research related to the future of critical thinking education in Japanese universities.

2. Literature Review I: Critical Thinking in Educational Practice

This chapter is divided into five sections, and aims to provide a detailed overview of critical thinking as a concept, as it has developed in the field of education, and consider the differing philosophical positions and cultural influences that contest it, both inside and outside of Japanese higher education. Critical thinking, like qualities such as creativity or intelligence is something of an intangible property, so this chapter begins by asking how it can be defined, and charts chronologically the evolution of this definition in the United States, in the 20th century. The next section investigates the philosophical antecedents that underpin the use of the term. Critical and conservative traditions are identified as contrasting philosophical positions that have differing understandings of the purpose of critical thought, and as a concept constructed in contemporary education, critical thinking is found to be aligned with the latter. Critical pedagogy is suggested as alternate educational theory influential in the twentieth century, that locates critical thinking within a critical tradition.

Thirdly, as a product of a rational tradition in Western thought, the interface between critical thinking and Asian cultures is considered. Cultural behaviours stemming from Confucianism are considered to have considerably influenced educational practices in Asian countries. Literature from intercultural communication is drawn upon to provide clues to the extent that Confucianism could be seen to dictate the learning behaviours of Asian students.

Fourthly, what are the challenges faced by those who seek to promote critical thinking as an educational outcome in Japanese universities? In much of the available literature, critical thinking has been viewed as problematic in East-Asian countries, for cultural, political and sociological reasons, with Japan in particular, the locus of much discussion. What are some of the perceived challenges to critical thinking education in Japan, and to what extent are they viewed to be a hindrance to educators?

Finally, teaching practices that are viewed as effective ways of developing critical thinking skills and dispositions are surveyed, and four possible approaches to curriculum planning and design are identified. These four models are particularly insightful for considering the approaches described by instructors in the second study, and the role these courses play within the curriculum. Views and evidence from the literature are presented on the benefits and drawbacks of each of these approaches.

Guided by these questions, this literature review covers five areas of interest: (1) a chronology of definitions of critical thinking in the 20th century, (2) the philosophical origins of critical thinking and critical pedagogy as competing educational theories, (3) views on the philosophical and cultural compatibility of critical thinking in East-Asia, (4) the challenges facing critical thinking education in Japanese universities, and (5) an overview of approaches to the teaching of critical thinking.

2.1 Definitions of Critical Thinking

Since critical thinking can be defined in a number of different ways consistent with each other, we should not put a lot of weight on any one definition. Definitions are at best scaffolding for the mind (Paul, 2012, p. 7).

Definitions of critical thinking can be separated into those derived from a philosophical tradition, that are mostly concerned with the description of an ideal thinker, and definitions developed in the field of cognitive psychology which are primarily concerned with defining the patterns of psychological behaviour associated with CT (Lai, 2011, pp. 4-7). In education, the definitions most often referred to have mostly come from the philosophical side, with major proponents of the critical thinking movement such as Robert Ennis and Richard Paul coming from a background of philosophical training, and John Dewey notable among those that had laid the foundations for them. Furthermore, CT's basis in Western philosophy can be traced back 2500 years to Socrates and Socratic questioning. Articulated as a goal of education however, it is in the 20th century that the concept emerged and gained currency, particularly in the United States.

From early definitions to a 1980s critical thinking movement

Perhaps the first to discuss CT as a goal of education systems in the twentieth century was the great education reformer John Dewey, whose view of 'liberal learning' called for educators to be concerned with what he called 'reflective thinking':

Active, persistent, and careful consideration of a belief or supposed form of knowledge in light of the grounds which support it and the further conclusions to which it tends. (Dewey, 1933, p. 9)

In the 1940's, it was another American educator, Edward M. Glaser, who developed Dewey's reflective thinking into what is considered to be the first definition to use the actual term 'critical thinking':

The ability to think critically ... involves three things: (1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences, (2) knowledge of the methods of logical inquiry and reasoning, and (3) some skill in applying those methods. (Glaser, 1941, pp. 5-6)

Glaser's definition is centred around logic. Accordingly, CT is defined essentially as the application of logic to a given topic or problem. Yet this definition offers little clue as to how CT should be developed. An important distinction that has been elaborated in later definitions is made here between the discrete skills and a disposition, or 'attitude of being disposed'. However, the wording here suggests that this is a habitual character trait, rather than something that can be learned, while the use of the word 'skill' in the third part of this definition offers little indication as to the specific skills to be used, or how one goes about acquiring them.

In the 1980's, there was a growing educational interest in CT, and a bona fide critical thinking movement began to develop in the United States, which espoused new definitions

that were much more concerned with defining CT as a teachable skill. This was influenced greatly by the publication of 'A Nation at Risk: The Imperative for Educational Reform' (Gardner *et al*, 1983); a report produced by the Reagan administration's National Commission on Excellence in Education, that brought to light the growing perception of a failure of the American school system, and a sense of national crisis. The promotion of CT became major ambition of the reform initiatives taken in response to this (Dinkelman, 1990). Definitions that emerged from the discourse of the time, came to view CT as less to do with the application of logical, deductive reasoning than in Glaser's definition. For example, Robert Ennis' frequently cited definition of: 'rational, reflective thinking focused on deciding what to do or believe' (Ennis, 1987, p. 1), emphasizes critical thinking as a practical life skill that underlies all decision-making and the formation of belief. This definition also views the ability to reflect on one's own thinking, evaluating and re-evaluating the strengths and weaknesses of personal beliefs, to be as much a part of CT as the ability to apply reason.

Other definitions to emerge in the same period, similarly downplay the importance of logic, but also caused frictions that would spark debate around the best approaches to teaching. McPeck states that knowledge of logic has a "comparatively minor role- particularly when compared with knowledge of, and experience in a specific field" (McPeck, 1981, p. 8). For McPeck, thinking is always thinking about something: it is directed, and as such, CT cannot be studied as an isolated skill or separated from the learning of subject content. It needs to be taught not as something that is simply done, but as a way of doing something else (pp. 3-5). Thus, McPeck's definition is in opposition to Ennis' view of CT as a practical life skill that can be applied to all decision-making, and he defines it as:

The appropriate use of *reflective scepticism* within the problem area under consideration ... knowing how and when to apply this reflective scepticism effectively requires, among other things, knowing something about the field in question. (McPeck, 1981, p. 7; emphasis in original)

The emphasis placed on scepticism in McPeck's definition has been challenged by Ennis for giving critical thinking a negative connotation (Ennis, 1993, p. 180), though McPeck himself stresses that the use of the word 'appropriate', qualifies this scepticism as something that should be used judiciously and directed, rather than a blanket that covers everything. The word 'reflective' suggests that this is also self-monitored, and that the aim is not necessarily to be a cynic. Indeed, both Ennis and McPeck's definitions consider self-reflection to be an essential element of CT; something not present in Dewey and Glaser's earlier definitions.

Between the McPeck and Ennis definitions, the question of whether critical thinking is a broadly applicable life skill, or dependent on expertise in a specific field is raised. This has implications for the teaching and testing of critical thinking. While both definitions view critical thinking as a teachable, practical life skill, Ennis, among others (Lipman, 1988; Siegel, 1988) suggests that it is teachable as a discipline in its own right. On the other hand, McPeck stands in opposition to this view, arguing that domain specific knowledge is a pre-requisite for being able to think critically, and the capacity to do so increases parallel to the acquisition of knowledge in a field. This suggests it is best taught or assessed as a part of other subject content, not in isolation. While this question will be returned to and examined

in more detail in the section that looks at common approaches to teaching, it can be argued that it is the Ennis view that has gained more traction, and despite being superseded by consensus definitions in the 1990s, it is still frequently cited definition today (perhaps because of its relative simplicity). Arguably however, the argument between the two positions has not been conclusively resolved, and the view of critical thinking as teachable independent of subject specific knowledge may have been favoured as this was the view more suitable to the marketability of CT for the emergent critical thinking movement.

Consensus definitions and a 'second wave' of critical thinkers in the 1990s

A problem with both the Ennis and McPeck definitions, is that while they developed a theoretical understanding of critical thinking that is more relevant to educators, and construct an image of an ideal thinker, those definitions still do little to answer the question of 'how': to describe the discrete skills involved in critical thinking, which can also suggest practical means of teaching it. Neither do they make a clear distinction between the skills and the disposition. As interest in CT grew in the US in the 1990's, and the self-proclaimed critical thinking 'movement' became more established, attempts to define CT also became more concerned with representing necessary criteria for classroom practice, developing unanimity of understanding between educators from different fields, and articulating the relation between skills and disposition. Therefore, the two major consensus definitions that emerged in this period are both concerned with capturing critical thinking as a process, and describe a range of interconnected skills.

Furthermore, those involved in developing these new definitions were to form a 'second wave' of critical thinking scholars (Walters *et al*, 1994) who challenged the reduction of thinking skills to a set of logical procedures further, and emphasized reflexive aspects. Drawing from feminist and postmodernist critiques, they argued that empathy and imagination should not be ignored in favour of logic as valid aspects of critical thought (Gallo, 1994, p. 45) and emphasized it as a holistic social practice that needed to pay attention to social context and the biased conceptual frameworks that all thinking develops out of. Second wave critical thinkers called for: 'a more inclusive theoretical model of critical thinking that recognizes the multi-functionality, contextuality, and emancipatory nature of good thinking' (Walters, 1994, p. 19). In keeping with this, the two consensus definitions drafted in this period reinterpret CT as a reflexive process incorporating a wide range of skills:

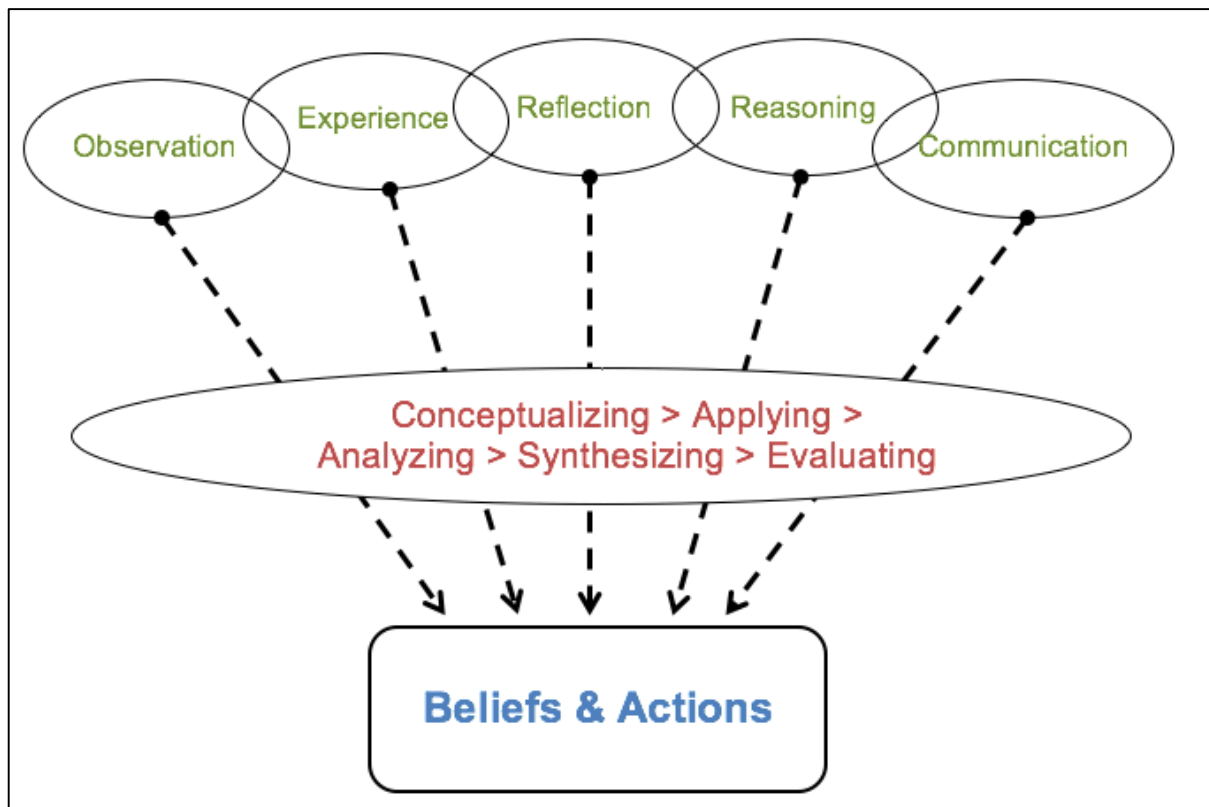
Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and/ or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning or communication as a guide to belief and action (Scriven & Paul, 1996)

We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based (Facione, 1998, p. 2).

In both of these definitions, skills such as interpretation, analysis and evaluation are highlighted over logic. Facione's definition, which is based on the consensus of a forty-six member expert panel, emphasises the meta-cognitive abilities of a thinker to connect the evidence, methods, criteria and context around their thinking. Scriven and Paul's definition, drafted and disseminated through the 'National Council for Excellence in Critical Thinking', similarly captures thought processes operating on several levels. With their interest in metacognitive aspects of learning and the categorization of higher order thinking skills, both these definitions also reflect concepts found in Bloom's '*Taxonomy of Educational Objectives*', originally published in 1956, but receiving renewed attention and undergoing revision around the same time (Krathwohl, 2002).

By referring to CT as a 'guide to belief and action', the Scriven & Paul definition follows on from Ennis in suggesting that it is a generally applicable life skill and therefore worth studying as a subject in its own right. However, reason, rather than being at its core, now becomes an object of critical thinking. It has been placed alongside observation, experience, reflection and communication as a stimuli for critical thinking, which essentially entails five processes; conceptualizing, applying, analyzing, synthesizing and evaluating. It is these processes that are the core of critical thinking: they act as a filter for information, to guide actions and beliefs, and the use of this filter is something that can be trained and improved, by focusing on teaching the five skills as a process; to be used in an intellectually disciplined way. Figure 2.1 is an attempt to illustrate the complex interactions that Scriven & Paul's definition describes:

Figure 2.1 A visualization of Scriven & Paul's (1996) definition of critical thinking.



My visualization here aims to highlight the fact that in this definition, critical thinking contains numerous processes that interact in complex and varied ways. In addition to the filtering function that is represented vertically, observation, experience, reflection, reasoning, and communication are also interconnected on a horizontal axis. The five core skills that act as a filter for these stimuli flow together in a way that suggests a sequential process, similar to the ranking of thinking skills in Bloom's taxonomy: application of a concept, analysis of the application, synthesis of the insights generated by analysis, and final evaluation. However, these skills can also be used independently of each other, or in other combinations.

Thus, whereas previous definitions suggested critical thinking to be a single, complete process, this definition proposes a continuous process, with a multitude of

possible interactions. Furthermore, the ways in which a student can think critically are far more varied than was possible within the limited framework presented within previous definitions. For example, they could be engaging with a problem critically by silently observing through listening, and synthesizing with their own beliefs, or communicating their own concept of the problem based on their own experience; rather than just following a taught pattern of logic, or seeking out weaknesses in a line of argument.

However, this is not to suggest that all thinking is critical, or that CT can include ambiguous or messy thinking. Another key aspect of the Scriven and Paul definition is the metacognitive grasp of these processes that is necessitated, if CT is to be performed in an 'intellectually disciplined' manner. Thus, use of the discrete skills alone cannot constitute CT without a critical disposition, as Scriven and Paul expounded upon in their statement of definition:

Critical thinking can be seen as having two components: 1) a set of information and belief generating and processing skills, and 2) the habit, based on intellectual commitment, of using those skills to guide behavior. It is thus to be contrasted with:

- 1) the mere acquisition and retention of information alone, because it involves a particular way in which information is sought and treated;
- 2) the mere possession of a set of skills, because it involves the continual use of them; and
- 3) the mere use of those skills ("as an exercise") without acceptance of their results.

(Scriven & Paul, 1996).

Development of this habit through questioning the intellectual standards of one's own thought is a major focus of the approach to the teaching of critical thinking taken by Richard Paul and those who have adopted his methods. These practices revolve around the analysis of one's own thinking processes, and testing them against a set of intellectual standards (see figure 2.2). Through continued practice in questioning whether one's own thought processes meet these standards, a habit is developed.

Figure 2.2. Intellectual Standards used in critical thinking guides published by the Foundation for Critical Thinking. (Elder & Paul, 2008, p. 12)

Clarity	<ul style="list-style-type: none"> • Could you elaborate further? • Could you give me an example? • Could you illustrate what you mean?
Accuracy	<ul style="list-style-type: none"> • How could we check on that? • How could we find out if that's true? • How could we verify or test that?
Precision	<ul style="list-style-type: none"> • Could you be more specific? • Could you give me more details? • Could you be more exact?
Relevance	<ul style="list-style-type: none"> • How does that relate to the problem? • How does that bear on the question? • How does that help us with the issue?
Depth	<ul style="list-style-type: none"> • What factors make this a difficult problem? • What are some of the complexities of this question? • What are some of the difficulties we need to deal with?
Breadth	<ul style="list-style-type: none"> • Do we need to look at this from another perspective? • Do we need to consider another point of view? • Do we need to look at this in other ways?
Logic	<ul style="list-style-type: none"> • Does all this make sense together? • Does your first paragraph fit with your last? • Does what you say follow from the evidence?
Significance	<ul style="list-style-type: none"> • Is this the most important problem to consider? • Is this the central idea to focus on? • Which of these facts are most important?
Fairness	<ul style="list-style-type: none"> • Do I have any vested interest in this issue? • Am I sympathetically representing the viewpoints of others?

Tracing the development of a definition of critical thinking as an educational concept in the twentieth century, from Dewey and Glaser's early articulations, to the Scriven and Paul definition disseminated by the Foundation for Critical thinking, reveals a shift away from an understanding that is centred around logic, to one based around a set of higher-order thinking processes. In placing reason as its object, rather than its core, describing multiple and complex interactions, and focusing on the five teachable skills of conceptualizing, applying, analysing, synthesizing and evaluating, which act as a filter and guide to beliefs and actions, this definition provides a far more categorical and nuanced version of the concept than previous definitions had described. At the same time, a critical disposition, described as a fixed character trait in Glaser's early definition is now viewed as a habit that can be formed through instruction. The importance placed in reflexivity and intellectual discipline make it clear that the skills alone are only one side of the coin, and that a critical disposition is needed for these skills to actually be used in a critical way.

2.2 Critical Thinking, Critical Pedagogy, Neo-Liberalism and Critical and Conservative Philosophical traditions

While the social construction of critical thinking as an educational term is something that has been instigated in the twentieth century, and the emergence of the definitions that are described in the last section begins with John Dewey, the idea of critical thought is nothing so new, and philosophical antecedents for it date back as far as classical civilization. Critical thinking is essentially a philosophical kind of thinking, and philosophical musings on the nature of thought can be found before Socrates, in the work of philosophers such as Democritus (c. 460- c. 370 BC), who categorised ways of knowing into perceived, sensory

‘bastard knowledge’ and reasoned, logical ‘legitimate knowledge’ (Dwyer, 2017, p. 43).

From such early antecedents, philosophers have been developing theories to conceptualize the way in which the mind makes sense of the world. Their theories have had implications for a vast range of human activity, transforming the understanding of fields from science to politics and law, but also have implications for what educators understand critical thinking to mean.

Socrates, Plato & Aristotle on Critical Thought

It is in Socrates (c. 469-399 BC), who questioned the nature of reality in order to understand truth and virtue, that the image of a critical thinker has been shaped as that of the Socratic questioner who wandered through the markets of Athens, exposing falsehoods in the reasoning of those he met: ‘upsetting people’s opinions about themselves and the universe’ (Needleman, 2003, p. 22). Socrates’ philosophical teachings are recorded and developed as complete theories in the work of his protege Plato (c. 427-347 BC), and the allegory of the cave, described through the dialogue between Socrates and Glaucon in book VI of Plato’s Republic, is an allegory for critical thought. The philosopher has questioned the imperfections of the reality experienced by men in the cave, and by this process ascends to see ideal forms in the light of the sun. Through doing so, he comes to understand that the reality experienced in the cave is lived through mere shadows of ideal forms, projected onto the cave walls by those in control, who obscure the truth for those in the cave (see figure 2.3).

Yet Plato is also clear that once their thinking has transcended the imperfections of real world and entered the realm of forms, the philosopher's duty and desire must be to return to the world of men, and to become leaders who shape society in the image of their ideals, or as Socrates puts it: 'they must be made to descend again among the prisoners in the den, and partake of their labours and honours' (Plato, p. 378). For Plato and his mentor Socrates (who was to pay the ultimate price for it), the object and agenda of critical thought is to transform and overcome the imperfections found in society.

Figure 2.3. Illustration of the allegory of the cave from Plato's Republic, Book VI.

(Source: <https://marthakennedy.blog/2017/05/25/allegory-of-the-cave/> Accessed September 13th 2019)



For Plato's pupil Aristotle (384- 322 BC) on the other hand, the object of critical thought is one's own thinking. Aristotelian logic involves drawing inferences from the structure of the propositions that derive an argument. It is a formal logic based not on the content or subject matter of an argument, but on its form and structure (Dwyer, p. 46). While Aristotle's logic, like Socratic questioning reveals falsehoods, the process is very much the purpose: the aim is to improve and sharpen one's own thinking processes. Between Plato and Aristotle's work, two differing agendas for critical thought therefore become apparent: one outward facing, and one inward looking. When the work of other thinkers throughout the history of Western philosophy is considered along the same lines, a divide between a critical and a conservative tradition can be clearly distinguished. This is not to say that the philosophers who can be categorised in these two traditions have no interest in the objects that are the other tradition's concern. Just as Plato wrote much about the self, and Aristotle wrote much concerned with politics, later adherents of both traditions were renaissance thinkers, who made contributions to the advancement of learning in many fields and transformed the understanding of both self and society. But in the way that they direct their reasoned arguments, they can be divided into those whose agenda is critical: to transform society, and those whose agenda is conservative: to improve their own minds.

The Conservative Tradition and Critical Thinking

From ancient Greece through the middle ages, renaissance, enlightenment and industrial age, many of the great European thinkers have made their own reasoning the target of their critical, reasoned thought. Thomas Aquinas (c. 1225- 1274) was greatly influenced by Aristotle, and through seeking out a way by which the truths that Aristotelian

logic reveals about nature and the world, and the truths of faith could converge, he developed an approach to his writing in *Summa Theologica*, in which he consistently and methodically scrutinises his own assertions from counter-positions (Herman, 2014, pp. 234-5). Through doing so, Aquinas developed the view that reason was located in God, and that he had bestowed it to man; a position that would become that of the Catholic church.

Later, Francis Bacon (1561-1626), the originator of the modern scientific method, would argue that people develop bad thinking habits ('idols' as he called them) if left to their own devices, and in his book 'The Advancement of Learning' emphasised the need to study the natural world empirically. He describes the biases and tricks of logic that are played by our own minds, and that must be overcome in developing opinions:

The human understanding when it has once adopted an opinion (either as being the received opinion or as being agreeable to itself) draws all things else to support and agree with it. And though there be a greater number and weight of instances to be found on the other side, yet these it either neglects and despises, or else by some distinction sets aside and rejects, in order that by this great and pernicious predetermination the authority of its former conclusions may remain inviolate ... it is the peculiar and perpetual error of the human intellect to be more moved and excited by affirmatives than by negatives; whereas it ought properly to hold itself indifferently disposed toward both alike. (Bacon, 2017, p. 11)

In this eloquent description of what today would be termed as confirmation bias, the struggle to be a critical thinker is a struggle with the demons of one's own mind. This is what

leads Richard Paul, and the other proponents of the critical thinking movement to remark of Bacon that 'his agenda was very much the traditional agenda of critical thinking' (Paul, Elder & Bartell, 1997, p. 9).

Rene Descartes (1596-1650) fifty years later, was similarly influenced by Aristotle. His famous thesis of human consciousness, "I think therefore I am" provides for him evidence of his own existence, and also is a summation of his reliance on a process of methodical scepticism (Cartesian doubt), to determine which of his own beliefs he could be certain of. In his posthumous work 'Rules for the Direction of the Mind' (published in 1701), he emphasises the need for all thinking to be doubted and tested. Bacon and Descartes' methods of analysis would later be influential to British Empiricists such as John Locke (1632-1704), and David Hume (1711-1776), even if they were opposed to Descartes rationalism (Buckingham et al., 2017, p. 131). Together with Thomas Hobbes (1588- 1679), their work advanced an understanding of the 'social contract' by which individual and society are bound, and in so doing 'laid the theoretical foundation for critical thinking about basic human rights' (Paul, Elder & Bartell, p.9), which would lead to the development of a conservative liberal tradition.

For John Stuart Mill (1806-1873), the idea of the social contract should serve to promote not only individual freedom, but individuality of thought. As a utilitarian and liberal, Mill saw this as the key to promoting the greatest good for the greatest number of people:

If all mankind minus one, were of one opinion, and only one person were of the contrary opinion, mankind would be no more justified in silencing that one person, than he, if he had the power would be justified in silencing mankind ... The peculiar evil of silencing the expression of an opinion is that it is robbing the human race; posterity as well as the existing generation; those who dissent from the opinion, still more than those who hold it. (Mill, 2010, p. 27).

Echoing Bacon's call for rigor against confirmation bias, Mill's appeal for society to be accepting of all individual views also realizes the importance placed in self-critique, through overriding the instinct to reject opinions contradictory one's own position.

From Thomas Aquinas to John Stuart Mill then, the thinkers that make up this conservative tradition are united by their reverence to Aristotle (who Mill called the 'judicious utilitarian' (Herman, p. 444), and also to Aristotelian logic and an understanding of the aim of critical thinking as a self-critique. And it is to these philosophers that the proponents of the critical thinking movement that developed in the United States in the twentieth century have shown greatest reverence (Paul, Elder & Bartell, pp. 8-11), and in whose work, they most zealously locate the origins of the brand of critical thinking that they espouse: one that looks inward and aims to make our own thought processes the object of our critical thought.

The Critical Tradition and Critical Pedagogy

Another philosophical tradition however, can be described around those who like Socrates and Plato make society the object of their critical thought, and in doing so, try to imagine a better version of society, in which a concern with the logic of one's own thinking is replaced with a concern for the wellbeing of others. Many of these philosophers also took a great interest in education, as they saw it as the key to developing citizens of the kind of platonic society they envisioned. Such a vision of society can be found in Thomas More's (1478-1535) vision of Utopia (1516): a satirical piece of renaissance fiction which imagines the idealized social and political life of a newly discovered island society, but which was also a critique of the mores of the world in which he lived:

For if you suffer your people to be ill-educated, and their manners to be corrupted from their infancy, and then punish them for those crimes to which their first education disposed them, what else is to be concluded from this, but that you first make thieves and then punish them (More, 2003, p. 24).

For Jean Jacques Rousseau (1712-1778) in the enlightenment period, Hobbes and Locke's idea of the social contract by which humankind is bound to live in civil society, becomes a critique of the corrupting influence of society over man in his "natural state":

I have endeavoured to trace the origin and progress of inequality, and the institution and abuse of political societies, as far as these are capable of being deduced from the nature of man merely by the light of reason ... It follows from this survey that, as

there is hardly any inequality in the state of nature, all the inequality which now prevails owes its strength and growth to the development of our faculties and the advance of the human mind, and becomes at last permanent and legitimate by the establishment of property and laws. (Rousseau, 1755, p. 37)

Rousseau's vision of humankind in an ideal state is a 'noble savage', uncorrupted by civil society and the ownership of property. This is a view that was influential to Immanuel Kant (1724-1804), who would have concurred that 'civilization adds nothing to man's moral make-up; instead it ends up becoming a distraction from our moral duty' (Herman, p. 396). Therefore, Kant sees humankind taking morally guided actions based on a form of pure reason (rather than one guided by religious or social mores). He understands this intrinsic moral consciousness as a 'categorical imperative': a set of reasoned principles that inherently drive people to act in an ethical way towards others, while socialization may create situations which contradict this categorical imperative and lead people to act in unethical ways. This is best exemplified in the second of Kant's formulations of categorical imperatives, which dictates that people cannot ever deny the humanity and status of another person and treat them as a means to an end (Kant, 1785, p. 46-7). Slavery would therefore go against this categorical imperative. Kant's hope was that the laws and ethics of civil society and its institutions could be transformed in order to be governed by such principles. The notion here, of overcoming the contradiction between an ideal, and the reality of the material world is further suggested by the three stages of Hegel's dialectics: the thesis, antithesis and synthesis that shape historical progress; which the dialectical materialism of Marx and Engels would adapt as a way of understanding the social structures of the material world in terms of economic problems and socio-economic phenomena.

In the work of these philosophers who follow in the tradition of Socrates and Plato to direct their critique at the inequalities of the material world, critical, analytical tools that can act as a filter to 'guide belief and actions' can be found; from Socratic questioning, to Kant's categorical imperative and Marx and Engels' dialectical materialism. Yet in conceptualizing critical thinking in education in the 20th century, the proponents of the critical thinking movement have rooted their model in the conservative tradition of Aristotelian logic, the rigorous self-critique of Aquinas and Bacon, Descartes' Cartesian doubt, and Mill's liberalism.

Another 20th century educational movement however, which constructs an alternative model of critical thinking that is entrenched in the critical tradition, in particular in Marx's dialectical materialism, can be found in Paulo Freire's critical pedagogy. Freire (1921-1997), a Brazilian educator who developed his theories through building literacy programs in poor, rural farming communities, theorised in his most famous work, 'Pedagogy of the Oppressed'; a model for education that makes the causes of oppression an object of reflection for those who are oppressed by it, this reflection providing the motivation to strive for their emancipation (Freire, 1993, p. 24). First published in English in 1970, the term critical thinking is actually used (at least in translation) to describe the dialogical interaction between teacher and student:

True dialogue cannot exist unless the dialoguers engage in critical thinking ... thinking which perceives reality as a process, as transformation, rather than as a static entity- thinking which does not separate itself from action, but constantly immerses itself in

temporality without fear of the risks involved ... Only dialogue, which requires critical thinking, is also capable of generating critical thinking. Without dialogue there is no communication, and without communication there can be no true education.

(Freire, 1993, pp. 65-66).

While more a descriptive text than a formal definition of critical thinking, this passage can be contrasted with the Scriven & Paul definition discussed in the previous section. Here the 'process' that the thinker is observant to is change that takes place in the material world, rather than the 'intellectually disciplined process' of monitoring their own thinking. Critical thinking is the ability to perceive this change and transcend a static focus on the present. It is accessible through dialogue and communication, rather than treating communication as an object, and it requires, rather than merely guides action.

Critical Thinking, Critical Pedagogy and Neoliberalism

Why then, did American educators, looking for ways to tackle a perceived crisis in their education system in the 1980's not look to Freire's understanding of critical thinking? Why would the MEXT in Japan not look to critical pedagogy for ideas about how to reform Japanese education? Freire's famous critique of the 'banking concept of education' clearly describes the kind of passivity inducing classroom practices, reliant on lower-order thinking skills that the MEXT are trying to move beyond:

Narration (with the teacher as narrator) leads the students to memorize mechanically the narrated content. Worse yet, it turns them into "containers", into

“receptacles” to be “filled” by the teacher. The more completely she fills the receptacles, the better a teacher she is. The more meekly the receptacles permit themselves to be filled, the better students they are. (Freire, 1993, pp. 44-5).

Furthermore, why would the advocates of the critical thinking movement not include Freire, or reference the philosophers of the critical tradition in their conception of CT? The answer is that critical thinking and critical pedagogy are incompatible.

Broadly looking at the two ideologies, critical thinking and critical pedagogy can be said to share a similar concern for a ‘general population in society who are to some extent deficient in the abilities or dispositions that would allow them to discern certain kinds of inaccuracies, distortions, and even falsehoods’ (Burbules & Berk, p. 45). They both endeavour to help people to be more critical in order to free themselves of clouded judgement, perceive the world more clearly and act appropriately.

Yet while critical thinking is primarily concerned with identifying and evaluating evidence, critical pedagogy is more concerned with identifying motivations and asking who the beneficiaries are within social structures. The paradox is that for the critical pedagogue, it cannot be enough to just teach students to think well: they must also utilize that thinking to transform the ideas, relationships and power structures that impose limits on their freedom. Conversely, for the critical thinker: ‘critical pedagogy crosses a threshold between teaching criticality and indoctrinating’ (Burbules & Berk, p. 57). The critical thinker wants students to reach their conclusions independently. They do not wish to politicize them. For the critical pedagogue on the other hand: ‘all education is political; teaching is never a

neutral act' (Freire, 1993, p. 19). Following from this, any attempt to depoliticize or neutralize the classroom is in itself a political act.

This then, is the crux of the incompatibility of these two pedagogies, and why Freire is conspicuous by his absence from discourses on critical thinking. It also explains why critical pedagogy would be unpalatable to Reagan era education reformers in the US, and to what the MEXT in Japan seek to instil as the values of the *global jinzai*. Because their reform initiatives are essentially neo-liberal reforms, shaped by a free-market economic agenda and neo-liberal worldview, that students are educated to serve within:

Under neoliberalism, dominant public pedagogy, with its narrow and imposed schemes of classification and limited modes of identification, uses the educational force of the culture to negate the basic conditions for critical agency.
(Giroux, 2011, p. 135).

Understood from this perspective, critical thinking can be seen as teaching students critical analytical skills and intellectual discipline, but within a limited framework that does not lead them to question or challenge dominant social structures. By framing critical thinking as a disciplined evaluation of evidence used to decide what to believe, critical thinking could also be used to direct our gaze away from broader motivations and causes that would lead one to question dominant social structures and institutions.

2.3 Critical Thinking and Eastern Thought

Learning without thought is labour lost; thought without learning is perilous. Study without reflection is a waste of time; reflection without study is dangerous.

Statement attributed to Confucius (c. 551-479 BC)

While a critical stance is often viewed as something embedded historically into Western educational cultural practices and has for a long time been considered a desirable trait for educators to promote, in many Asian societies this has not necessarily been the case. While education systems in Hong Kong, Singapore, Korea, Taiwan, China and Japan are frequently associated with high achievement in maths and science and perennially rank at the top of the PISA world rankings in these categories (PISA, 2018), there is a perception from inside and outside that these education systems fail to develop their student's innovative and critical skills. Educators in some of Asia's high performing schools confide that: 'the results can't cover up our problems' (Gifford, 2010) and voice their concerns about an overreliance on rote-learning to the detriment of analytical or creative abilities.

Confucius in the classroom?

The root of this is often contended to be that Asian philosophical traditions do not have the same basis in reason as Western philosophy. As noted at the beginning of this chapter, critical thinking has its origins in a spirit of logical inquiry beginning with Plato and Aristotle. This is reflected in the work of later thinkers, and has been traced through the

history of western philosophy, from Thomas Aquinas, to enlightenment philosophers such as Descartes, Hobbes, Locke and Kant (Paul, Elder, & Bartell, 1997, pp.8-10). However, a tradition of reasoned argumentation has been mostly absent in Chinese philosophy. Social psychologist Richard E. Nisbett, in seeking antecedents of logic in Chinese thought, finds only two short-lived exceptions in the classical period (the Ming-Jia and Mohists), concluding that: 'by the first millennium A.D. there were essentially no traces of a logical approach to understanding the world' (Nisbett, 2004, p. 166-7). Particularly in regard to education, Confucianism is perceived as explicitly and unconsciously at the heart of Asian philosophical orientations: Explicitly in terms of teaching practices and unconsciously in terms of the characteristics that define Asian students. Turner notes: 'As much of what is written in Confucian texts concerns principles of teaching and learning, it is not surprising that an educational context brings them to the fore' (Turner, 2011, p. 100).

Yet is it fair to lay the blame for the dearth of an innovative and analytical spirit in Asian students at Confucius feet; to argue that East Asian students' cultural heritage holds influence over their learning styles and dispositions in modern day classrooms, resulting in a clash with Western pedagogy? Such a view could be seen as an orientalist interpretation of Confucian influence, explaining the perceived backwardness of Asian cultures in comparison to Western civilization. Indeed, non-Western philosophies are rarely treated as equal to Western philosophy, which often presents itself as the universal philosophy. Scholars of philosophy may consider other lineages of thought to be below them:

Comparative philosophy – study in two or more philosophical traditions – is left almost entirely to people working in anthropology or cultural studies. This abdication

of interest assumes that comparative philosophy might help us to understand the intellectual cultures of India, China or the Muslim world, but not the human condition (Baggini, 2018)

Contemporary Confucius scholars refute the claim that critical thinking has no basis in Confucius' writings, and are quick to point out that critical thinking and rationalism have precedents in Confucius' work (Kim, 2011; Lam, 2015; Tan, 2016, 2017). Furthermore, in historical descriptions of the ancient world, debate and argumentation seem to have been as much a part of the lives and work of the philosophers of Chinese antiquity as they were in Athens:

Early Confucian texts record lively dialogues between students and their masters, and students were not afraid to speak up if they disagreed with their masters.

Confucians disagreed with each other and they also came in for philosophically sophisticated criticism from rival thinkers such as the Mohists, Legalists and Daoists. Another early Confucian, Xunzi, recommended the study of persuasive speaking for princes eager to combat these "heretics." (O'Dwyer, 2017)

The issue is perhaps not so much in the content of Confucian texts or in ancient practices having become entrenched as traditions, but in values such as harmony and loyalty, embodied unconsciously in Asian communication styles which have been socialized through schooling: 'Such principles in fact need not be consciously adhered to in the minds of the participants; they are rather culturally inscribed and witnessed in repeated behaviour patterns, often from early schooling onwards, and so form part of routine behaviour'

(Turner, 2011, p. 98). While most people do not consciously articulate the philosophical assumptions they have absorbed and are often not even aware that they have any, assumptions about the nature of self, ethics, sources of knowledge and the goals of life are deeply embedded in cultures and frame people's thinking without there necessarily being an awareness of them. It is the fact that these philosophies are unconsciously and habitually part of behaviour that often causes friction with a rational, critical stance, which asks people to question their conventional wisdom and observe their own thinking from outside.

In Japan, the pervasiveness of such unconscious behaviours in classrooms may stem less from 2500-year-old philosophies, and more from the development of a mass education system in the late 19th century that aimed to develop a strong sense of national identity and obedience in citizens. Meiji era philosopher, Inoue Tetsujirō, having returned from Europe where he had studied Western philosophy, sought to revive Confucian thinking as a basis for modern social systems. He was selected by the Ministry of Education to pen a commentary on the 1890 Imperial Rescript on Education, for use as a textbook on ethics and morals, in which he 'fabricated the rudiments of the family-state ideology from Confucian analogies of ruler to father, and Western organic theories of the state' (Gluck, 1985, p. 129). In the post war era of the 20th century, similar educational strategies have been employed in South Korea and Taiwan to instil conformity, discipline and a sense of national identity in schoolchildren (O'Dwyer, 2017). The Confucianism that these ideologies are based on actually has little to do with the original philosophical writings of Confucius. As Tian and Low (2011) argue, the content of Confucian texts had also been co-opted in ancient times, as Confucian values were 'devices that were used to harness a diverse and widespread population under unitary political control in the Han and Song dynasties' (Tian & Low, 2011,

p. 68). and note that ‘we should be very cautious indeed about conflating Confucius with (later) Confucianism’. To some extent then, it is the manipulation of Confucianism towards political, nationalistic ends, rather than the philosophies themselves that has shaped the behaviour patterns that are expected in classrooms across East Asia.

Student behaviours attributed to Confucianism

With regard to Asian students and their supposed lack of an inclination towards critical thinking, three particular aspects of their cultural behaviour have been picked up by educators, linguists, anthropologists and cultural psychologists, which are connected to Confucianism: a deference to hierarchy, a desire to preserve the existing harmony in a group, and the importance placed on context in communication. When Asian students study in Western countries, or when Western educators teach in Asia, these aspects have come to the fore in the observations of researchers.

Hierarchy, is a central tenet of the Confucian view that: ‘Mankind would be in harmony with the universe if everyone understood their rank in society and observed the behaviours proper to that rank’ (Meyer, 2014, p. 130). Social structure brings harmony, and the maintenance of harmony is dependent on adherence to hierarchical relationships. Confucius preached a model of five hierarchical relationships that were the foundation of social structure: Emperor over subject, father over son, husband over wife, older sibling over younger, and senior friend over junior. In Japanese society, this can be strongly linked with the concept of *Amae*; the relationship of deferment and benevolence between junior

and senior, as described by the psychologist Takeo Doi, in 'The Anatomy of Dependence' (Doi, 1995).

In the classroom, this is most strongly manifested in the relationship of teacher and student. Students are expected to follow a teacher unquestioningly because: 'The Confucian mentor is an exemplar, providing a model for the students to follow and learn from, in their own individual journey of self-perfection' (Turner, 2011, p. 161). Western teaching, on the other hand, has a tradition of Socratic 'midwifery', as educators seek to elicit and induce an awakening from their students. When the world of the Western educator and Asian student collide, the results can sometimes be comically absurd:

On the one hand, the tutor is desperately trying to elicit some kind of critical comment from the student, while, on the other hand, the student is ardently awaiting words of wisdom from the tutor. (Turner, 2011, p. 186)

Closely linked to hierarchy is a desire to maintain social harmony in a group. In societies influenced by Confucian thought: 'group harmony exists when everyone plays his prescribed role and reinforces the roles of others' (Meyer, p. 199). Social equilibrium is a goal pursued by the whole, and the individual subjugates themselves to this. In Japanese society, maintenance of social harmony characterises relationships in both formal and intimate settings, as observed by anthropologist Edward T. Hall (1989):

The Japanese are pulled in both directions. The first is a very high-context, deeply involved, enveloping intimacy ... There is a deep need to be close and it is only when

they are close that they are comfortable. The other pole is as far away as one can get. In public and during ceremonial occasions ... there is a great emphasis on self-control, distance, and hiding inner feelings' (Hall, 1989, p. 66-7)

Harmony is linked to both of these modes of thought: the harmony of '*uchi*' (inside): being within an intimately connected group, and the harmony sought through conflict avoidance and face-saving in formal situations with those outside of your group ('*soto*'). Yet both conditions are a challenge to the promotion of critically engaging discussion in the classroom, as Asian students seek consensus agreement from the group, and tend to hesitate to reveal inner misgivings, rather than taking sides on an issue, or voicing disagreements. In one study, a Chinese Master's student in the UK interviewed about their experience of critical discussion in a British class, describes the difficulty of crossing this cultural divide: 'Sometimes when you are talking they [the British or European students] will stop you in the middle with disagreement. That makes you very embarrassed and scared. They should listen, at least until people have finished talking' (Durkin, 2008, p. 46).

A third trait attributed to Confucius is the importance placed on context in communication. Whereas Western philosophy often considers ideas in isolation, as objects of investigation, pulling them away from their context so that they can be analysed in an objective light, in Confucian thought, it is the surrounding context itself which is considered crucial to developing an understanding of the world:

'Chinese religions and philosophies ... have traditionally emphasized interdependencies and interconnectedness. Ancient Chinese thought was holistic,

meaning that the Chinese attended to the field in which an object was located, believing that action always occurs in a field of forces that influence the action' (Meyer, p.110).

This view of the world has influence over communication patterns in East-Asian societies, where communication is not simply something conveyed in a verbal message, but pays attention holistically to the situation and context. Hall drew attention to the importance of context to communication in countries such as Japan and China by identifying them as 'high-context' cultures, in comparison with countries such as Germany and the United States which are classified as 'low-context':

A high-context (HC) communication or message is one in which most of the information is either in the physical context or internalized, in the person, while very little is in the coded, explicit, transmitted part of the message. A low-context (LC) communication is just the opposite; i.e., the mass of the information is vested in the explicit code. Twins who have grown up together can and do communicate more economically (HC) than two lawyers in a courtroom during a trial (LC). (Hall, p. 91).

This distinction between high and low context is also described in other taxonomies of cultural difference such as the aspect of 'uncertainty avoidance' in Hofstede's cultural dimensions theory (Hofstede, 2011). With much of communication in Japanese social situations dependent on non-verbal schema, the ability to 'read the air', or understand implied messages becomes: 'a crucial element of *joshiki*- the common sense social knowledge' (Shaules, 2015, p. 136). In one cross-cultural study of attitudes to critical

thinking, Japanese students, when asked about characteristics of good thinkers identified ‘thinking from a third person’s point of view’ or ‘considering and listening to others’ as the most important skills (Manolo *et al*, 2015, p. 304-6). However, in Western classrooms these thinking skills are not valued highly, in comparison with explicit, reasoned, evidence-based argumentation.

Critical thinking as a filter, culture as a screen

Taken together, hierarchical, harmony-seeking thought, and communication that pays attention to context over the explicit message could, for reasons stated above be viewed as an affective filter to critical thinking. However, from another point of view, critical thinking simply operates differently in Asian cultures. Hall writes that: ‘one of the functions of culture is to provide a highly selective screen between man and the outside world’ (Hall, p. 85). Culture provides a schema –a map by which the world is navigated or a lens through which the world is seen. If critical thinking as a ‘guide to belief and action’ is a filter through which culture is to be navigated and understood, then it can be understood to be part of the cultural schemata that by necessity takes a different shape according to the cultural landscape. In high-context, hierarchical societies, where social harmony in a group is emphasised, persuasive arguments, direct disagreement and evidence based reasoning are simply not a good fit.

This does not therefore mean that there is a lack of critical thinking inherent in cultural practices; rather that critical thinking is used to interface with the culture in a different, culturally attuned way. Although the characteristics of Asian culture described

above may seem to be in opposition to Western notions of critical thinking, this does not mean that critical thinking is not being exercised in other, less obvious ways. For example, hierarchical thinking can result in an unquestioning deferment to authority, but could also lead to the evaluation of information being based on consideration of the reliability of its source. A statement such as 'The teacher said it, so it must be true' might not show much critical judgement, but asking whether a speaker is qualified to know about a given topic is a critical question to ask. Likewise, harmony-seeking can lead to consideration of a problem from various perspectives, and a chastening of the dogmatic, opinionated tendencies that lead to hasty judgement. Holistic, high-context communication requires skilled inference of messages based on the evidence embedded in a context: reading between the lines rather than accepting messages at face value. Considered from these perspectives, critical thinking, when performing its function as a filter to an Asian cultural screen, involves the same basic processes described earlier in Scriven & Paul's definition of critical thinking: conception, application, analysis, synthesis and evaluation.

Referring to a description of student behaviours that inhibit critical thinking (See section 2.5 for a more detailed description), can provide an interesting perspective here. Raths *et al* (1966) list eight behaviours that limit or counter the effectiveness of critical thinking instruction as: (1) Impulsiveness; (2) over-dependence; (3) failure to perceive cause and effect; (4) misunderstanding concepts; (5) Dogmatism; (6) rigidity/ inflexibility; (7) lack of confidence; and (8) anti-intellectualism (Raths *et al*, 1966; qtd. in Pithers & Snoden, 2000, p. 242). Of these, only over-dependence can be attributed to one of the characteristics of Asian thought described here (hierarchical thinking). By contrast, many of the other characteristics can be viewed as strategies that are used to successfully overcome the other

inhibitors of critical thinking described, such as impulsiveness, dogmatism, and inflexibility. It is therefore not necessarily the case that the characteristics of Asian thought inhibit critical thinking at all. On the contrary, these characteristics can be viewed as incorporating necessary strategies to enable a form of critical thinking that is appropriate to their cultural context. Put another way, it would be uncritical for critical thinking not to be attuned to the culture within which it operates.

2.4 Critical Thinking at Japanese Universities

The promotion of critical thinking within the Japanese education system in general and Japanese higher education in particular, has for a long time been viewed as problematic. For cultural reasons described in the previous section, related to a perceived mismatch between Western academic traditions and East-Asian cultures, critical thinking has been described as essentially incompatible with Asian education systems. While the internationalization agenda in Japan has effectively rendered some of these cultural arguments redundant, there are others who critique the promotion of CT as a dilemma to Japanese higher education for political or sociological reasons.

Critical thinking as cultural thinking

Interest in CT began to develop in Japan in the 1990s, shadowing its emergence in the United States in the 1980s. Consciousness grew as part of wider discourses that culminated in the education reforms passed in 2002 known as *yutori kyouiku* ('education that gives children room to grow'). Although these reform policies mainly sought to reshape

elementary and lower secondary education, they signalled the opening of a wider discussion of the function of the education system in Japanese society, and with *ikiru chikara* articulating a description of the young citizens that the MEXT sought to nurture, the promotion of CT in higher education also became part of these broader discussions (Cave, 2007, p. 18).

However, with similar reforms being made in other education systems in Asia around the same time (Bjork, 2016, pp. 164-171), the appropriacy of attempting to teach CT in East-Asian cultural settings became a topic of debate, particularly around language teaching at universities in Japan, with several Japan-based researchers in the fields of applied linguistics and TESOL bringing the issue to the fore:

Critical thinking is cultural thinking ... discoverable if not clearly self-evident only to those brought up in a cultural milieu in which it operates, however tacitly, as a socially valued norm (Atkinson, 1997, p. 89).

The charge brought by Atkinson and others (Davidson, 1998; Day, 2003) is that to teach critical thinking in Asian contexts is a form of cultural imperialism that forces an individualist, Western mode of communication onto students from a collectivist, group-oriented culture. While many of the culturally distinguishing characteristics that they pick up on were described in the last section, their view that the promotion of critical thinking education is 'xenophobic' (Long, 2003, p. 215), because Asian students cannot be expected to perform within an individualist framework has itself been critiqued for applying 'taken-

for-granted' generalizations about Asian students. Such stereotypes are viewed as unfounded, and lay bare an orientalist othering of Asian cultures, whose authors:

... tend to create a cultural dichotomy between the East and the West, constructing fixed, apolitical, and essentialized cultural representations such as groupism, harmony, and de-emphasis on critical thinking and self-expression to depict Japanese culture (Kubota, 1999, p. 9).

Furthermore, with critical thinking's increasing prominence in Japanese education reform discourse since the turn of the century, the significance of these discussions has been negated to a certain extent. Long argues that there is a clear mandate for critical thinking education coming from the Japanese government and business community in response to internationalization, and this invalidates reservations about teaching CT in Asian contexts, which ironically have come mostly from non-Japanese, Japan-based educators (Long, 2003, p. 218). In the contemporary climate, as the teaching of critical thinking skills is being actualized in Japanese universities, whose mission statements it has been written into and where critical thinking courses are offered, the question of whether critical thinking *should* be taught seems less relevant: it is being taught.

Political and sociological dilemmas

However, that is not to say that the challenges to critical thinking education are easily surmountable. Rear (2008) considers these challenges to be political rather than cultural, and suggests that critical thinking poses a dilemma for Japan's conservative

government and business elites, for while they may hope to develop competitive business leaders with a penchant for independent judgment, other characteristics promoted by CT education such as non-conformity, and the rejection of assumptions behind conventional thinking are traits they may not wish to promote. The contention here highlights the fact that the concept of critical thinking, for many Western educators has an underlying association with social critique. Yoneyama concurs that critical thinking poses a dilemma to 'hierarchical, competitive and conformist institutional structures' (Yoneyama, 2012, p. 235), but locates the challenge in the classroom, and therefore sees the issue as primarily sociological, rather than political or cultural. For her, critical thinking in a deep sense can only be promoted through critical pedagogy in which students and educators are engaged with social change, and without creating an educational environment that is open and free, critical thinking is merely given lip service as a means to neo-liberal ends:

It would regress to the kind of critical thinking that does not lead either to emancipation or empowerment of the learner, nor to the transformation of society towards greater social justice. If the élite are 'empowered' with this kind of (shallow) 'critical thinking' in what is an increasingly polarising Asia, it is possible that the power structures in Asia will become increasingly more rigid and immobile, while the real issues will become less and less visible, and the voices of the oppressed less and less audible (Yoneyama, 2012, p. 242).

As the ambitions of the MEXT internationalization programs are realized, how such dilemmas play out remains to be seen. Knight's distinction of the internationalization of education as a process distinct from globalization; propelled by and propelling globalization

has seemingly been embraced in the internationalization efforts undertaken through the G30 and 'Top Global University' projects. Nevertheless, as discussed at the end of chapter two, the concept of internationalization or *kokusaika*, has itself been described as a multi-vocal symbol in Japan, used ambiguously and with differing agendas (Goodman, 2007; Yonezawa, 2010). International education programs create potential spaces for the openness needed to promote CT, yet it has been ideologically entwined with the political and social agenda of the conservative Japanese establishment, and the ability of educators to follow a socially transformative pedagogy within this system may be constricted within a contested field.

2.5 Approaches to the Teaching of Critical Thinking

While the previous four sections have been concerned with critical thinking as a concept, viewed from different perspectives, the research at hand is also concerned with the actualization of critical thinking education as a practice. Concurrent with the development of theoretical understandings and definitions described earlier in section 2.1, a great deal of research has been devoted to the kind of interventions that can be made by teachers in order to foster the critical thinking abilities of their students. While a number of teaching approaches are taken, and the debates around which of these constitute best practices have at times been quite heated, there is a general consensus that teaching interventions can have some success. A number of quantitative studies have used critical thinking assessment instruments in pre/ post testing to evaluate the effectiveness of critical thinking courses of different types (Gadzella, Ginther & Bryant, 1996; Halpern, 1998; Hitchcock, 2004; Reed & Kromrey, 2001; Rimiene, 2002; Solon, 2007), and among others,

these works have led several literature reviews of CT to conclude that: ‘instructional interventions aimed at improving student’s critical thinking abilities have generally shown positive results’ (Kennedy et al, 1991, p. 38); ‘critical thinking can be taught’ (Lai; 2011, p. 29) or that it is ‘reasonable to suggest given the large body of research which indicates that critical thinking instruction can enhance critical thinking ability’ (Dwyer, 2017, p, 195). The ability to infuse CT through teaching is not in question, it would seem, and the efficacy of various approaches taken to curriculum and course design become the object of scrutiny.

How not to teach it

What then, are the best practices for teaching CT, and what kind of teaching practices could be considered detrimental? Early researchers in the field tended to focus on approaches to teaching that hinder the development of critical faculties (perhaps because such teaching practices were more commonplace and not being widely scrutinized at that time). However, while not directly described, more appropriate methods can clearly be inferred from their descriptions of bad teaching practices. For example, Raths *et al* (1966) identified eight student behaviours that are detrimental to critical thinking. They found that the development of a critical disposition is inhibited when students:

- (1) Act without thinking (impulsive); (2) need help at each step (over-dependent); (3) use goal-incompatible strategies (do not perceive cause-effect relationships); (4) have difficulty with comprehension (miss meaning); (5) are convinced of the ‘rightness’ of their beliefs (dogmatism); (6) operate within narrow rule sets (rigidity/

inflexibility); (7) are fearful (not confident); and (8) condemn good thinking as a waste of time (anti-intellectual).

(Raths et al, 1966; qtd. in Pithers & Snoden, 2000, p. 242)

Based on these criteria, they consider types of teacher behaviour that allow such bad thinking habits to form in the classroom to hamper critical thinking. These include, teachers who merely affirm or deny student's arguments without reasoning why; who explain content without elicitation, cut off student's responses, fail to praise or encourage new ideas, and focus only on the ability of students to memorise and recollect course content (Pithers & Snoden, 2000). Two decades later, Sternberg (1987) also focuses on ineffective teaching practices, claiming that 'there are more ways to fail than to succeed' (Sternberg, 1987, p. 456) and challenges 'lecturers who believe they have nothing to learn from students' (p. 456), or that 'critical thinking is solely the lecturer's job' (p. 457), in a scathing critique of teacher-centred approaches.

Although this branch of research is focussed on what teachers ought not to do, some ideas about what teachers should do are also easy to infer from them: Critical thinking may be more effectively promoted in a student-centred setting, by a teacher who aims to facilitate rather than instruct, who provides students with opportunities to explore and discuss topics, and who creates an environment in which students can speak out without fear.

Four approaches to curriculum design

The debate around domain specificity between the standpoint taken by McPeck (1981) and Ennis (1987) (discussed in section 2.1) has implications for critical thinking instructional approaches. Taking McPeck's position that the ability to use CT is dependent on knowing something about the subject in question, it follows that critical thinking needs to be taught along with subject content, rather than through a general course. Yet those who take on Ennis' view of CT as a broadly applicable life skill, assert that "as one learns to think critically, one is better able to master content in diverse disciplines" or that "in principle, all students can be taught so that they learn how to bring the basic tools of disciplined reasoning into every subject they study" (Paul, Elder, & Bartell, 1997, p. 3, p. 11). From this position, a dedicated, general course in CT would seem to be the way to go.

Ennis later proposed a typology of four approaches to introducing critical thinking into curricula: general, infusion, immersion and mixed (Ennis, 1989, p. 4-5). The 'general' approach involves direct, explicit teaching of CT skills in the form of an independent course. Some subject content might be used to contextualize some tasks, but the focus is on explicit training in critical thinking methods, and the learning of critical thinking takes place in isolation from other academic disciplines.

The 'infusion' approach on the other hand, embeds explicit instruction on critical thinking principles into the teaching of subject content. Thus, critical thinking might be 'infused' across the curriculum. Similarly, in an 'immersion' approach, critical thinking skills are involved in the learning of subject content, but without an explicit focus. In this

approach, which might be seen as a traditionally held view in liberal arts education, it is assumed that students acquire critical thinking skills as a natural consequence and incidental outcome of learning and engaging with academic subject content, through tasks such as essay writing or debate. Lastly, the 'mixed' approach combines both a foundational critical thinking skills course, and the infusion of critical thinking methods into the instruction of discipline-specific academic courses, thus combining general and infusion approaches in a curriculum.

Each of these approaches have their proponents. Halpern, in an assessment of several critical thinking courses, finds the general approach delivered through a 'broad-based, cross-disciplinary course' to be effective (2001, p. 278). Van Gelder also advocates for explicit teaching, arguing that infusion or immersion are not enough:

Critical thinking cannot be treated as just a kind of gloss on educational content made up of other 'real' subjects. Students will not become excellent critical thinkers merely by studying history, marketing or nursing, even if their instruction is given a 'critical' emphasis (as it should be). Critical thinking must be studied and practiced in its own right: it must be an explicit part of the curriculum. (Van Gelder, 2005, p. 43)

Others take the opposite view. Jones (2015), in a study based on interviews with educators across a number of disciplines including physics, economics, law, medicine and history advocates for an infusion approach: 'even within one discipline critical thinking takes many forms ... generalizable critical thinking is a useful foundation for disciplinary critical thinking but will not substitute for it' (Jones, 2015, p. 179). Therefore the difference

between proponents of the general and infusion models may be one of perspective on the purpose of critical thinking: Those who emphasise CT as a skill applied in academic contexts may tend to favour infusion, while those whose aim is to foster students who use CT in their everyday lives favour a direct approach. This is the position that Ennis has for a long time defended:

Embedding critical thinking in other course offerings would then also be useless for the pursuit of the commonly-accepted goal of helping students to think critically in their everyday lives- to the extent that the content of their everyday lives is not the same as the content of the courses. (Ennis, 1997, p. 2)

Indeed even those who advocate for infusion accept that the effectiveness of such an approach may be limited for pragmatic reasons. Bailin and Battersby (2015), who believe infusion to be ideal, note that in reality, 'reasoning and argumentation are generally not a focus of disciplinary pedagogy' (Bailin & Battersby, 2015, p. 125). Without an effective systematic effort to train instructors across disciplines to blend critical thinking elements into their courses, the effectiveness of infusion will be limited. For this reason, a direct approach may be more practical.

Another view is that the debate need not focus on an either/ or dichotomy, as the most effective way may be found by combining the direct and infusion styles into a mixed approach. By involving instructors of critical thinking courses in teacher education and faculty development, an integrated, unified curriculum in which disciplinary instructors are well equipped to train students in CT may best help students to apply their critical thinking

skills across disciplines as well as to everyday problems. This kind of an approach has been advocated by both Facione (1990, p. 10) and Paul (1992).

A recent meta-analysis of quantitative research goes some way toward providing a definitive answer on which of the four approaches might be most effective. Abrami *et al* (2008), analyzed 117 empirical studies that focused on the effectiveness of critical thinking instruction, from an original sample of 3,720. All studies included in the analysis used either a control / experimental group, and / or a pre-test and post-test model, and they reported a significant positive effect ($g+ = 0.34$) on critical thinking abilities from the combined aggregate of all the studies in the meta-analysis. Furthermore, using Ennis (1989) typology of four course types to differentiate the CT training methods used in the 117 studies, it was found that courses using a mixed approach had the greatest positive effect on CT performance ($g+ = 0.94$), followed by infusion ($g+ = 0.54$), general ($g+ = 0.38$) and the immersion approach, which had the smallest effect ($+ = 0.09$).

From these results, it can be discerned that the approach taken in a course greatly influences the enhancement of CT performance, and the immersion approach, which is the only one that doesn't make CT an explicit objective to students is least effective. The assumption that exposure to disciplinary academic content alone effectively promotes critical thinking proves false. The slight improvements in CT measured from an immersion approach may not even be attributable to courses themselves, but rather to the developing maturity of students, as other studies have found performance on critical thinking assessments to generally improve with age and experience (Tindal & Nolet, 2017).

Furthermore, it is also clear from Abrami *et al*'s findings that mixed and infusion approaches appear to be the most effective, in contrast to the general approach. Given the fact that many who advocate for a general approach may have a vested interest in promoting it over infusion, as they themselves are often the teachers of these courses, it is not surprising that it should have very vocal support from inside the critical thinking movement. However, infusion would appear to be more effective, though as noted earlier, it can be more challenging to implement with coherence across the curriculum by instructors from a broad range of disciplines. Therefore, critical thinking taught through general critical thinking courses can be a more practical solution depending on circumstances, and when combined with infusion in a mixed approach, seems to have a significant benefit over the use of infusion alone. Furthermore, the potential use of such courses and their instructors as a resource for faculty development, to promote effective infusion of CT into disciplinary teaching should not be overlooked.

2.6 Chapter Summary and Implications for this Project

The scope of this chapter has been broad, aiming to incorporate a review of definitions of critical thinking, which have been contextualized within the history of Western philosophical thought and contrasted with critical pedagogy in terms of having a basis in a conservative rather than a critical philosophical tradition. The relation between CT and Asian culture under Confucian influence in general, and in relation to Japanese higher education in particular have also been discussed. Finally, different approaches to teaching critical thinking as a set of skills and as a disposition have been reviewed.

Critical thinking as concept

Charting the chronological development of definitions of critical thinking of relevance to educators, it has been shown that the definition moved beyond a focus on logic that marks earlier definitions, toward a multifaceted definition focused on a core of teachable skills: conceptualizing, applying, analysing, synthesizing and evaluating. These skills act as a filter of information, in order to guide the beliefs and actions of an individual. Scriven and Paul's (1996) definition of critical thinking has gained broad acceptance and is disseminated by the Foundation for Critical Thinking in the United States. It provides a definition that is more informative of approaches to classroom practice than definitions that came before it, and encourages reflexivity: 'thinking about your thinking while you are thinking in order to make your thinking better' (Paul, Binker, Martin & Adamson, 1989).

However, investigation into the antecedents of critical thinking in Western thought has situated this contemporaneous understanding of CT as an educational practice within a conservative philosophical tradition. Another tradition that makes social practice, rather than our own thought processes the object of critique could also be identified, and critical pedagogy, based on the writings of Paulo Freire provides a counterpoint to critical thinking as a type of education that also aims to critically engage students, but which directs their attention to social structures that oppress them. In contrasting these two similar, yet at the same time ideologically incompatible pedagogies, it is clear why one would be useful to a neoliberal agenda of education reform, while the other is irreconcilable.

Critical thinking is also understood to be a part of socio-cultural schematic knowledge. While the view that Asian students have difficulty in applying critical thinking skills in Western educational settings is quite commonly held, it can be argued that this does not necessarily mean that they have any lack of a critical faculty. Indeed, behaviours displayed by Asian students as they operate in their own cultural settings can be said to show a certain critical discernment that is necessitated by their social circumstances. Nevertheless, a number of researchers considering the role that critical thinking can play in the higher education sector in Japan, have described it as a challenge or dilemma, for cultural, political, and sociological reasons, and despite the greater prominence given to CT in the discourses of internationalization, these challenges continue to be contentious issues: perceived as affective barriers to critical thinking education.

There are several implications for the research at hand here, based on the findings in relation to these different areas. Scriven and Paul's definition of critical thinking, the culmination of a consensus developed by a 'second wave' of thinkers in the critical thinking movement, informs this research, as it has been visualised in figure 2.1. However, it should be noted that Ennis' (1987) definition, despite having been conceptually superseded, is still the most frequently cited, particularly in research related to Japan. This may simply be due to its ease of understanding, or because the different implications that underscore other definitions were not necessarily of relevance in those particular studies. However, Atkinson (1997), Rear (2008) and Yoneyama (2012), whose work is referred to in the previous section, all cite the Ennis' definition as the basis for their work. Indeed, in the case of Atkinson, his contentious article was published only three years later than a seminal publication which heralded the 'second wave' of critical thinkers in the United States (Walters, 1994) and just

one year after Scriven and Paul's definition had been published. It may be the case that at the time of writing the paper that has sparked much debate in Japan, Atkinson was unaware of the existence of the second wave thinking in the United States: the spread of academic knowledge through the internet was far less prolific and rapid at that time. What is more, the thesis that critical thinking is only 'discoverable' to those brought up in a Western culture can actually be challenged using Scriven and Paul's definition, which places less emphasis on logical reasoning, and a heavy emphasis on reflexivity. Therefore, at the same time as Atkinson critiqued the validity of tasking students in Asian classrooms to deliver reasoned arguments, the concept of critical thinking was itself being reframed in the United States to move beyond cold logicism (Walters, 1994, pp. 1-22).

However, while the Scriven and Paul definition can be utilized to inform this investigation of how critical thinking is integrated into Japanese higher education through internationalization initiatives, critical thinking can also be understood from this review to be a contested concept. Several 'versions' of critical thinking have been discussed: a conservative critique that guides a thinker to evaluate their own thinking; a social critique that asks the thinker to challenge the social structures that confine them; a version of critical thinking that could be in tune with schematic knowledge of Asian cultures and educational practices that are influenced by Confucian thought, and one that is not. Considered from the point of view of the different stakeholders within Japanese higher education whose understanding is sought here: the MEXT, university program administrators, academics and course instructors and students, each of their understandings could be influenced to a greater or lesser extent by these different versions. The MEXT, and the university administrators who work under their directives seek a critical

thinking model that suits the neoliberal agenda of educating *global jinzai*. They are likely to draw their understanding of CT from the conservative tradition, and from their understanding of the values underlying Japanese culture as essentially harmony seeking and respectful of hierarchical relations. The mostly Western academics and course instructors who teach critical thinking may have an understanding that they have drawn from literature on critical thinking, or they may have developed their own understanding, that is more akin to the agenda of critical pedagogy. They are also likely influenced by their own knowledge of Japan and work within the constraints of programs set up by administrators and the MEXT. As a result, several conflicting ideologies shape the critical thinking education that students receive.

Critical thinking as practice

A review of research and the discussion about the merits of four approaches to implementing critical thinking instruction into the curriculum identified a 'mixed' approach of 'direct' teaching and 'infusion' of critical thinking educational practices into the teaching of academic subject courses across the curriculum as the most effective. Infusion alone was understood in Abrami *et al's* (2008) meta-analysis to be more effective than direct teaching alone, while 'immersion' -the indirect acquisition of critical thinking through the learning of subject content- was least effective.

Given the importance placed by the MEXT in critical thinking as an outcome of undergraduate degree programs, it is worth considering which of these approaches are actually being taken in Japanese universities. In many cases, the courses in which CT is most

likely to be a specifically stated objective are English language courses taught by native instructors. Particularly in EAP (English for academic purposes) courses, critical thinking has been infused into textbooks and teaching practices. At several EMI degree programs at TGUs, where critical thinking is described as an objective of the program as well as of particular courses within it, there are also critical thinking courses that take a more direct approach. Yet few of these programs could claim to offer a mixed approach to curriculum design in which there is integration of direct teaching and infusion. Furthermore, as shall be discussed in chapter five, there is very little evidence of direct teaching of CT taking place at Japanese universities in Japanese. Additionally, in degree programs where much of the instruction in subject content is delivered through lectures and where teacher-centred practices are still commonplace, opportunities for immersion, let alone infusion are severely limited. The analysis of the interviews with 17 instructors of critical thinking courses in chapter eight provides an opportunity to consider the efficacy of these four approaches further.

The three stages of this research project can each be informed by the findings of this review, and can also make a contribution to specific points of discussion that have been raised. Stage One of this project; a critical discourse analysis of university mission statements, may be able to add to the discussion of political and sociological challenges to teaching critical thinking in Japan, by shedding light on what critical thinking represents to universities and how they present it in their self-promotional, purpose defining discourses. Analysis of interviews with instructors of critical thinking courses in stage two of this research, can investigate whether those instructors take a view of critical thinking that is in line with that of the critical thinking movement in the United States, or whether they draw

their understanding from other sources. It can also be informed by the four possible approaches to teaching critical thinking: direct, infusion, immersion and mixed. Stage three of this research, which surveys Japanese and non-Japanese students about the meaning of critical thinking is of significance to the discussion of Asian cultural thinking and educational practices, and can illuminate how students are affected by the contested nature of the field.

These studies are focused on developing an understanding based on empirical data, and it could be observed that there is a dearth of research that has approached the question of critical thinking's interaction with Japanese higher education in a practical way. The work of scholars such as Atkinson, Rear and Yoneyama have each constructed theories of the plausibility and efficacy of critical thinking education in Japan, based largely on literature and discourse critique. None of them have sought to investigate what happens on the ground: to go to the sites where critical thinking education is pursued, collect data, and investigate the understanding of instructors and students. By taking a qualitative, exploratory approach to the sites where critical thinking is preached and practiced in Japanese universities, this research can contribute some much-needed empirical work to this field.

3. Literature Review II: The Internationalization of Higher Education in Japan

This chapter aims to understand the phenomenon of internationalization, and examine the implementation of internationalization policies in Japan and their consequences, through a review of the literature. This chapter also aims to provide insights towards answering to core research question 1:

What is the impetus for the MEXT's interest in critical thinking, and how has it been framed in their education policies?

This chapter is interested in several questions and has been divided into four sub-sections. The first two of these provide background information. The first asks how internationalization emerged as a phenomenon and field of research, and how it has been conceptualized. Before specifically looking at the Japanese context, established definitions of internationalization need to be reviewed, to understand how it is distinguished from globalization, and the motivations that drive it. The next sub-section asks what the economic background is to the demand for internationalization in Japan. While internationalization of higher education in Japan is part of a global phenomenon and similar situations exist in many countries, there are also particular economic circumstances that have dictated the demand for internationalization in the Japanese case. These conditions have led to calls from the business community for the Japanese higher education sector to foster the skills of '*global jinzai*' in the students who graduate from university programs.

Knowledge of the economic background that has led to this is essential to understand present conditions.

The remaining two sections deal specifically with Japanese internationalization policies. The third asks what the key internationalization policies in Japanese higher education have been, and how they are being implemented. As MEXT funding initiatives shifted from the G30 project started in 2009, to the Top Global University project in 2014, the focus of internationalization initiatives has also shifted, all the while continuing to strive towards the goal of attracting 300,000 foreign students to Japanese universities. What are the main objectives of policies, such as the establishment of English-medium degree programs in selected institutions? Lastly, how have the MEXT's internationalization policies been evaluated by scholars? Internationalization in Japan has been critiqued from various angles, but viewing it as an ongoing process, it is necessary to consider the extent to which such criticisms might be justified.

Thus, the four sections in this chapter look at: (1) The conceptualization of the internationalization of higher education, (2) economic background factors leading to demand for *global jinzai* in Japan, (3) a description of the policies shaping internationalization in Japanese universities, and (4) evaluations of internationalization initiatives and education reforms in Japan.

3.1 Conceptualizing the Internationalization of Higher Education

‘No academic system can exist by itself in the world of the 21st century’

(Altbach, 2004, p.24)

Internationalization has arguably been the defining trend of higher-education at the start of the 21st century, not only in Japan but around the world. Higher education institutions in many countries have been forced to shift their gaze outward, as the dynamics of university campuses have been transformed. The imperatives for and consequences of internationalization differ according to locale, with some countries experiencing more benefits than others along a North-South divide, as developing economies struggle to avoid ‘brain drain’ through student mobility to the ‘global North’ (Morosini, Corte & Guilherme, 2017). Much like the broader phenomenon of globalization, a duality exists between a process that champions diversity while at the same time reinforcing the political, economic and cultural hegemony of the old order, and there are those who have voiced concerns about the ‘McDonaldization of the University’ (Altbach, 2004, p. 3) in an era of increasing marketization. The internationalization of higher education serves globalization’s needs. It is shaped by globalization, yet also has the power to shape it, as governments around the world increasingly view it as an important strategy toward strengthening their nation’s position in the global order. The emergence of internationalization as a social phenomenon and area of research interest in higher education, and the imperatives that motivate the stakeholders whose interests are invested in it are considered here.

Emergence of internationalization as a research field

The concept of the internationalization of higher education emerged in the 1990s as a descriptor for a wide variety of connected trends and phenomena that were being observed at universities around the world, and it has become a key theme of policy debates and higher education research. Of course, in many countries, universities have for a long time been seen as a hotbed for cosmopolitanism, and viewed as ‘international’ by comparison with the other institutions and sectors of society. Before the current era began, within academia there already existed:

A high appreciation of cosmopolitan values; pride was based on international reputation, international mobility and cooperation were not rare occurrences, and a universalist dimension of knowledge dominated many disciplines and was not viewed as marginal in others. (Teichler, 1999, p. 6).

However, at the same time, universities were still primarily national actors, funded and regulated according to their national stature, with the purpose of training students to perform roles within their national context. Although an international office could be found on most campuses, and other international exchange activities were not uncommon, their importance to the main mission of a university was often: ‘marginal, peripheral and – at most – decorative’ (Teichler, p. 6).

The impetus of globalization changed this in the 1990s. Socially, economically, technologically, and politically, societies around the world were becoming increasingly connected, not only with their immediate neighbors across national borders, but spanning continents. International political co-operation, the growth of multi-national corporations, trade, migration, and communication technologies were increasingly being facilitated between Europe, Asia, North and South America, Africa and Australasia. As governments sought to protect their national interests and employ successful strategies in the 'cross-border matching of supply and demand' (Quiang, 2003, p. 249), universities came under increasing pressure to change and adapt to the globalized economic environment:

The unprecedented growth, complexity and competitiveness of the global economy with its attendant socio-political and technological forces have been creating relentless and cumulative pressures on higher education institutions to respond to the changing environment requiring far reaching institutional adaptations. (Bartell, 2003, p. 43).

Specifically, the demands of the job market are a major factor shaping university internationalization, pushing universities to prepare students able to fulfil roles in a globalized society with knowledge and skills including multilingualism, and intercultural competency. This is facilitated in a context of increased international student mobility which has resulted in the growing importance of foreign student recruitment to institutional revenue streams in many countries. Thirdly, the widespread use of information and communication technology has been a catalyst for the democratization and spread of knowledge and delivery of programs (Quiang, p. 248-9). The ease with which prospective

applicants can access information on admission to programs around the world is illustrative of this. In the past, overseas study applications involved a long process of researching conditions in an intended destination country, making a written request (by post) to receive prospectuses and application forms (also by post), and several months of correspondence to and fro. Nowadays, it is not uncommon for would be students to find (or be found by) programs in a number of countries through internet searches (and targeted advertising), which they ponder *before* selecting a destination. The application process itself is streamlined through online application forms and interviews may be done via video call.

Defining the scope of internationalization

In attempting to delineate and define internationalization, scholars have faced two major challenges: to define the scope of internationalization with a range of internationalizing activities occurring within higher education at many levels, and to distinguish internationalization from globalization. As Knight writes: 'Internationalization, in the context of higher education, is often used interchangeably with the term globalization and is also used as a synonym for international, global, intercultural and multicultural education' (Knight, 1994, p. 3). As a result, it was difficult to separate the changes observed in higher education from wider social trends to which they were innately connected. However, as the research field developed, internationalization came to be viewed as a response to globalization (Qiang, p. 249). Internationalization became a strategy employed to mitigate the negative impacts of globalization and accelerate its beneficial aspects.

Still, many interpretations have been espoused as scholars have attempted to frame internationalization in relation to globalization. Teichler (1999) understands internationalization as dealing with cross-border activities in higher education and relations between countries, whereas globalization covers wider global movements, linked closely to a priority for global, technological and economic competitiveness. Furthermore, internationalization focuses on physical mobility of students, international academic cooperation and academic knowledge transfer, while globalization emphasizes the knowledge economy, the market economy and the commercialization of knowledge transfer.

However, this understanding limits the scope of internationalization to academic activities, separating it from all technological and economic aspects. Other definitions have sought to include these aspects in a broader concept of internationalization, in so far as they are connected to educational activities. Altbach et al. (2009) defined globalization and internationalization by comparing their influences on higher education. Globalization is defined by 'the broad economic, technological, and scientific trends that directly affect higher education and are largely inevitable in the contemporary world' (Altbach *et al.*, 2009, p. 23). On the other hand, internationalization refers to 'specific policies and programs undertaken by governments, academic systems and institutions, and even individual departments to deal with globalization' (Altbach *et al.*, 2009, p. 23). This broadens the scope of internationalization from academic activities taking place at an institutional level to include government policy and larger education systems. The key point here is that globalization is clearly distinguished from education, and is treated as something inevitable, that affects societies in ways that the government can have little control over, whereas

internationalization is a deliberate strategy for education systems to enable the society to cope with it and take advantage of it.

However, a second difficulty in defining internationalization arises specifically because it operates on many levels. It becomes a challenge for one definition to encapsulate processes at many tiers of the education system in a coherent way. In 1993, the Association of Universities and Colleges of Canada had concluded that ‘there is no simple, unique or all-encompassing definition of the internationalization of the university’ (AUCC, qtd. in De Wit, 2002). Canadian scholar Jane Knight (1994), perhaps incensed by this vagary, sought to draft such an all-encompassing definition. Knight warns against such ambiguity, at the same time recognizing the need for a definition to capture the multi-faceted complexity of the phenomena:

While internationalization should have wide scope, it is not helpful for internationalization to become a catch-all phrase for everything and anything international. As a catch-all it is diminished and becomes a camouflage for generalized and unrigorous reflection. A focused definition is necessary if it is to be understood and treated with the seriousness it deserves. (Knight, 1994, p. 3)

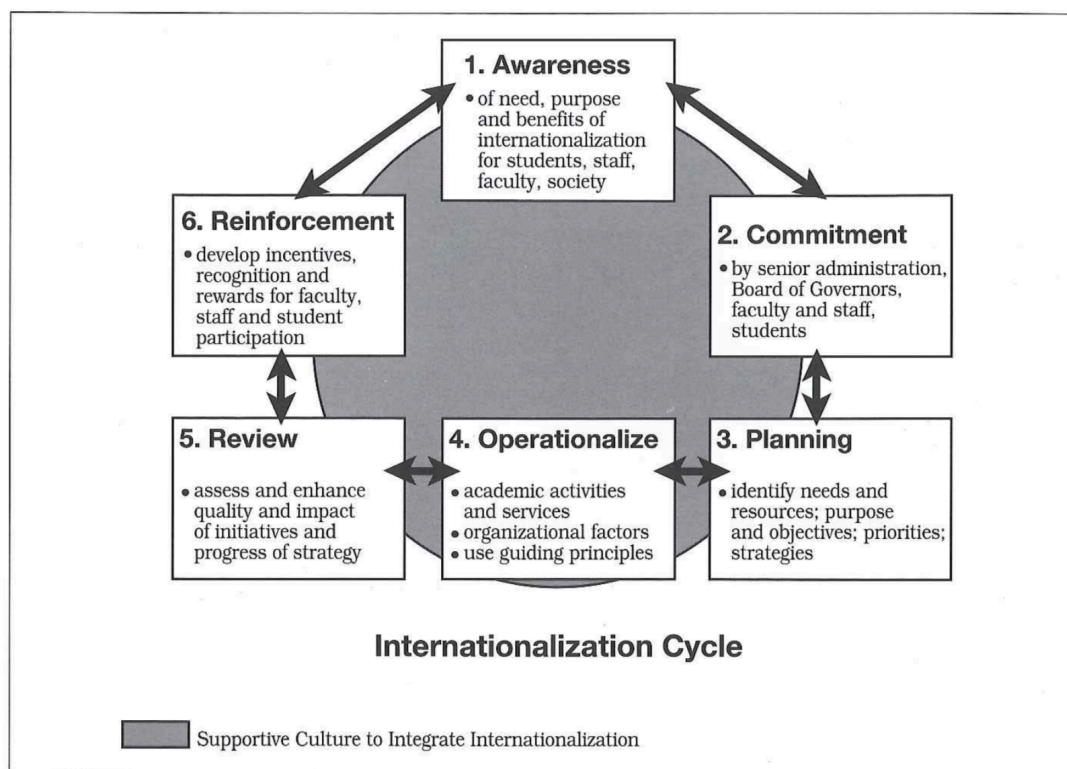
Knight defines internationalization as ‘the process of integrating an international, intercultural and global dimension into the purpose, function or delivery of higher education at the institutional and national levels’ (Knight, 2008, p. 21), an updated version of her earlier (1994) definition. This definition is broad in its scope, dealing with internationalization at national and institutional levels, and uses the term “process”

deliberately to emphasize how the characteristics of the internationalization of higher education are constantly evolving in tandem with globalization.

A cyclical view of internationalization processes

Knight views the process of internationalization as cyclical rather than linear, as depicted here in figure 3.1.

Figure 3.1 Knight's (1994) Internationalization Cycle.



Fostered within a 'supportive culture', this cycle illustrates how internationalization policies whether at micro or macro levels are conceived, planned, enacted and reflected upon. Review and reinforcement, the end stages of the process lead to new beginnings:

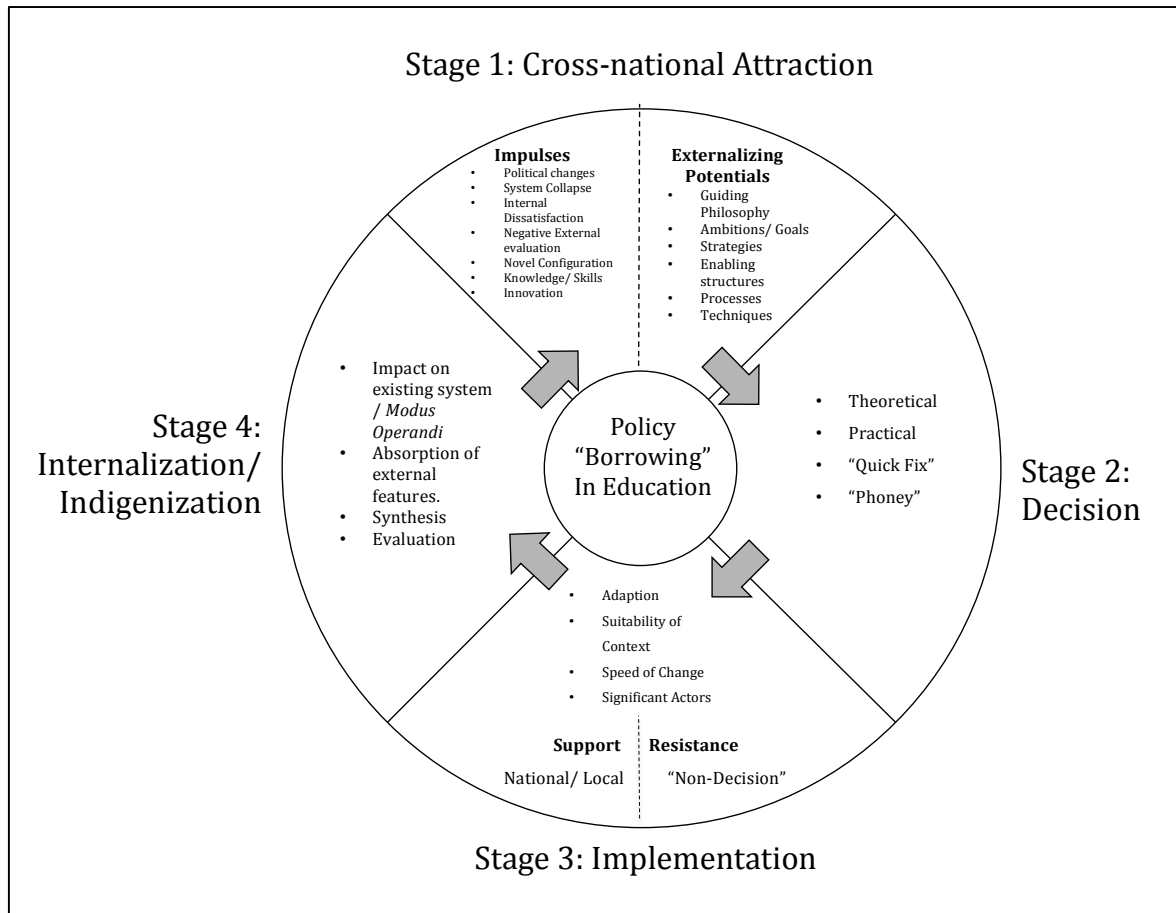
new awareness and more ambitious commitment. This in turn stimulates the development of future strategies and programs.

Knight (2008) also observes that internationalization has two streams to its process: 'cross-border education' and 'internationalization at home'. 'Cross-border education' includes policies that involve the transfer of people, ideas, programs or policies across national borders, and early research in the field tended to focus on this area, driven by increased student mobility. It is defined as 'the movement of people, knowledge, programs, providers, curriculum, etc. across national or regional jurisdictional borders' (Knight, 2008, p. xi). 'Internationalization at home' is perceived as a more recent aspect of internationalization, and refers to efforts made to bring internationalization to domestic campuses, such as 'an intercultural and international dimension in the teaching-learning process and research, extracurricular activities, and relationships with local cultural and ethnic community groups, as well as the integration of foreign students and scholars into campus life and activities' (Knight, 2008, p. 22). Both of these streams can be described effectively by the cycle shown in Knight's diagram. Whether describing a national-level policy to send students overseas, or an institution-level policy to support foreign exchange students on a domestic campus, the cycle is capable of representing the stages involved in either process.

A similar cyclical description is found in Phillips and Ochs model of 'Four Stages of Policy Borrowing in Education' (2003). This model describes the transfer of education policies from one setting to another through four stages of attraction, decision,

implementation and internalization/indigenization. These are visualized and elaborated in their own cyclical diagram shown in figure 3.2.

Figure 3.2 Four stages of Policy Borrowing in Education. (Phillips & Ochs, 2003).



This model was developed in the field of comparative education, which has a somewhat narrower focus on specific instances of cross-border transfer than research into broader internationalization movements, and therefore in its conceptual basis, it lies somewhere within the scope of Knight's model. However, the similarities between the two diagrams are striking. Phillips and Ochs model is also cyclical, illustrative of the way in which policies and programs, once internalized (stage 4), generate new impulses (stage 1).

However, whereas Knight's diagram shows internationalization growing out of a 'supportive culture', Philips and Ochs model includes representation of the antagonistic duality between support and resistance, and shows that sometimes the decision to introduce an international policy is made for 'phoney' or 'quick fix' reasons. As shall be seen in chapter 3.4, empirical research frequently highlights the questionable reasons that internationalization policies are enacted for, and the resistance they encounter in their implementation. Therefore, in seeking a framework within which the conception, enactment and embedding of programs and policies can be understood, this theoretical model is perhaps a more complete and useful guide to understanding internationalization policies than Knight's earlier, slightly simpler, more idealistic model.

Imperatives and rationales driving internationalization

As internationalization at an institutional level is increasingly driven by national policy, it is important to understand the motivations that fuel the commitment to large scale initiatives which can have broad and numerous consequences for society. Warner (1992) proposed three models of the approach or attitude taken towards internationalization: competitive, liberal and social transformation. A competitive model of internationalization aims to introduce an international aspect to education in order to make students, the institution, and the country as a whole more competitive in the global marketplace. In this approach, internationalization serves the needs of the economy and job market, and promotes intercultural competence mainly in service to business and industry.

The liberal model, based on the tradition in liberal arts education of developing the 'whole person', is concerned with self-development of students. The aim is to empower students to become citizens who contribute to global society without prejudice, and who are motivated to work internationally to solve global problems. The third, social transformational model takes these motivations a step further, and 'suggests that the most important goal of internationalization is to give students a deeper awareness of international and intercultural issues related to equity and justice, and to give them the tools to work actively and critically toward social transformation' (Knight, 1994, p. 4). Students educated with this vision of internationalization leave with an understanding of the injustices and inequalities perpetuated by globalization and a desire to overcome them. Parallels can be drawn between these three imperatives and the ideological discourses influencing of the primary stakeholders investigated here. *Global jinzai* discourse can be understood to be driven by a competitive, economic imperative, while critical thinking could be understood by educators to be part of a liberal tradition, or viewed as a transformative, empowering tool in the spirit of critical pedagogy.

One of the major challenges faced in enacting national policies at an institutional level is that different stakeholders at different levels are motivated towards internationalization differently: some seeking the benefits of the competitive model, while others are interested primarily in liberal development of the student or promoting social justice in global society. Johnson & Edelstein (1993) view the competitive model as the dominant *raison d'être* driving internationalization policies, to the detriment of a spirit of international co-operation. However, as a conception of internationalization has developed, there has been a recognition that these imperatives are often not distinct from each other,

as individuals with differing motivations work together to shape policy. Policies can be enacted most easily when they suit the sometimes contrasting intentions of different stakeholders. Knight (1997) therefore views the rationales that actually drive internationalization in a practical sense as either political, economic, academic or cultural/social. Within each of these realms, competitive, liberal and socially transformative visions of internationalization are amalgamated.

3.2 Economic Conditions Influencing Internationalization in Japan

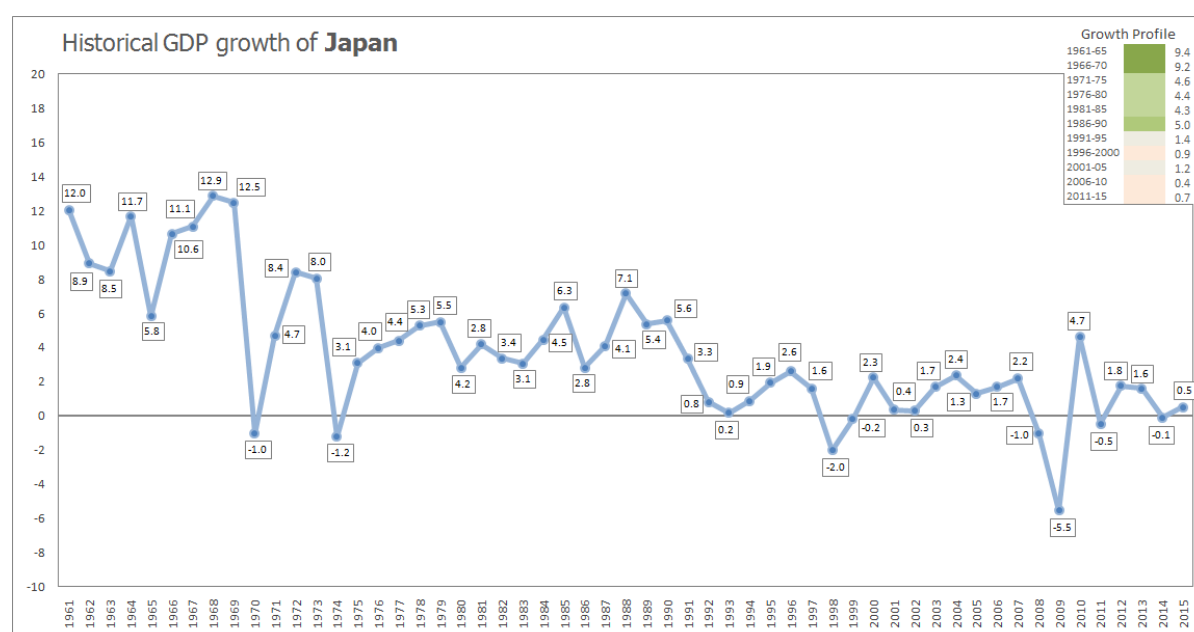
In order to understand the factors that drive the internationalization of higher education in the Japanese case, it is necessary to look at the economic and social background that has stimulated it. In particular, internationalization has been driven by demand from business and industry for so called *global jinzai*: the globally minded human resources that can help Japanese companies to develop their business interests in overseas markets, which have far greater significance in the 21st century than they did in the past. Japan's well publicized demographic circumstances cast a long shadow over the future, and the unprecedented scale of these long-term challenges forces the issue to the frontline, giving impetus for a need to be more open and economically outward looking.

Japan's economic past and future

From the end of World War II until the bursting of the bubble economy in 1991, Japan enjoyed a fruitful period of economic development frequently termed as 'Japan's

post-war economic miracle' (Okazaki, 2015). Within twenty years of the end of the war, Japan had 'risen from the ashes'. This symbolically culminated in 1964, an epoch-making year, with Tokyo hosting the Olympic games, and ten days prior to the opening of the games, the first *shinkansen* bullet trains were launched, connecting the metropolitan and industrial hubs of Tokyo, Nagoya and Osaka. For the 17-year period between 1956 and 1973, Japan's average GDP was 9.1 percent (Honkawa Data Tribune, 2018). Economic growth continued through the 1970s and Japan overtook the Soviet Union to become the world's second largest economy in the 1980s, when it's economic might was both looked up to and perceived as a threat in the United States (Fallows, 1989). However, after the bubble burst in 1991, Japan experienced a stagnant economy for a period termed as 'the lost twenty years', and has since struggled to return to former levels of productivity (see figure 3.3). China overtook Japan as the world's second largest economy in 2010 (Kollewe & McCurry, 2011).

Figure 3.3 Historical GDP growth of Japan, 1961-2015 (Source: Wikimedia Commons)



Demographic changes present a number of challenges going forward. The population of Japan is expected to decrease by 33.7 percent between 2010 and 2100, while the world population is projected to increase by 56.9 percent within the same time period (Honkawa Data Tribune, 2017). The low birth-rate that is the root of the problem, when combined with an aging population, will result in a 'greying' society dependent on a severely diminished workforce ("The old and older", 2010; see figure 3.4). This will not only lead to the domestic challenges of burdensome welfare and pensions support, maintenance of infrastructure, and the maturation of the domestic consumption market, but also to the relative shrinking of the Japanese presence in the world economy. Japan is projected to maintain its position as the third largest economy up until 2025 while falling further behind China and the United States. However, by 2050, it is anticipated that Japan will be ranked as the eighth largest world economy in terms of GDP, behind emerging countries including India, Brazil, Mexico, Russia and Indonesia (Goldman Sachs, 2007, p. 140; see figure 3.5).

Figure 3.4 Japan's projected population by age group (Source: The Economist)

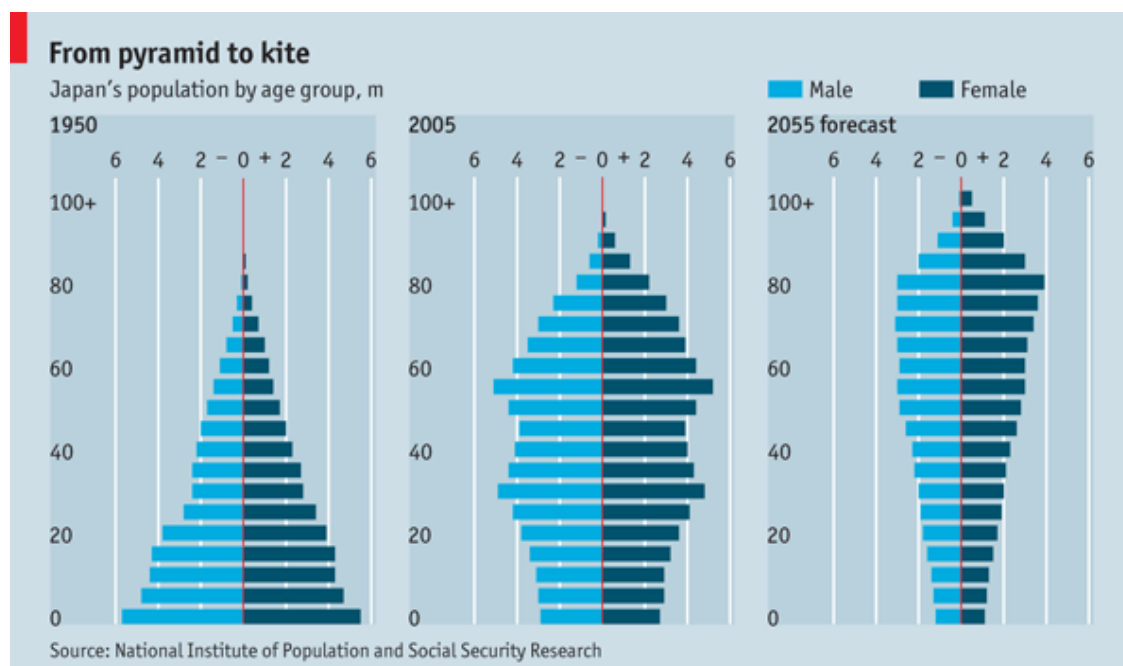
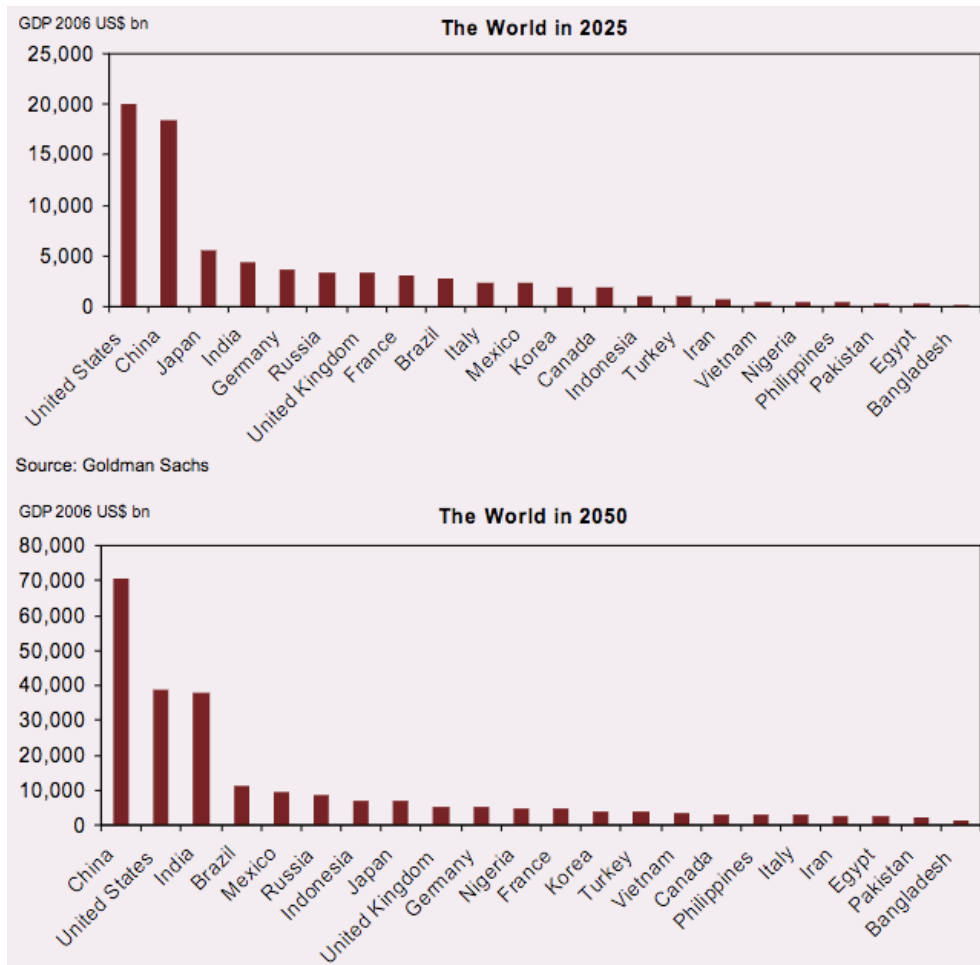


Figure 3.5 Countries ranked by GDP prediction in 2025 and 2050 (Source: Goldman Sachs)



Overseas markets and the need for global jinzai

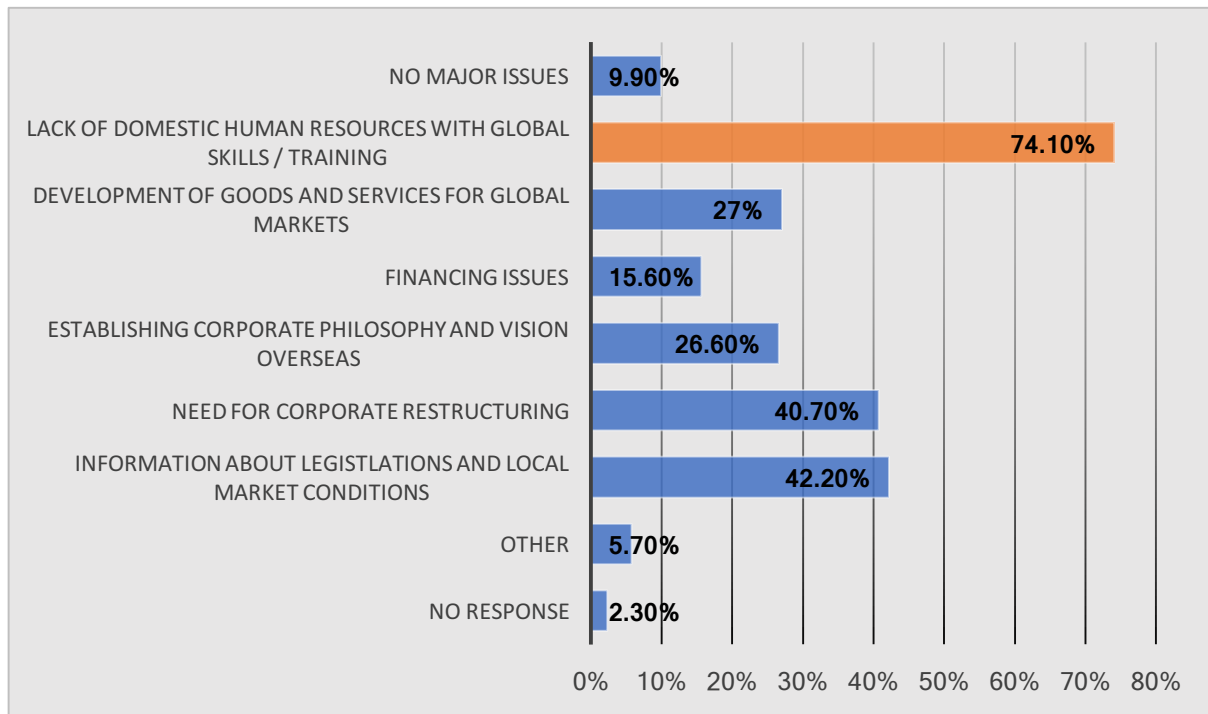
With their emergence as economic powers, the middle class is expected to expand in these rapidly developing countries, resulting in a significant increase to consumption of automobiles, home electronics, appliances and other goods and services. Considering these factors, there is a growing need for Japanese companies to focus on their business activities in overseas markets, which can be expected to become increasingly significant to their prosperity or survival. Yet the focus of many Japanese industries has shifted in recent years.

In 2017, the proportion of GDP attributed to domestic demand outstripped the exports that were once the bedrock of Japan's economic growth (Iwamoto, 2017). With the expansion of these and other emerging markets, Japanese companies need to actively advance their overseas operations in order to survive. However, their current presence in these markets is relatively small, while Chinese companies move to consolidate their position globally through the 'Belt and Road' initiative. Supported by investment from the Chinese state to develop the infrastructure of emerging economies, they establish local subsidiaries which closely follow local business models and suit local needs, while Japanese companies tend to make decisions from their headquarters in Japan.

Yet Japanese companies have been increasingly aware of a need to globalize and operate their overseas branches more effectively to be in tune with local needs and business customs. When, the Japan Federation of Economic Organizations surveyed the leaders of 263 Japanese companies in 2010 about the effective barriers to the establishment and management of overseas branches, at 74.1 percent, by far the largest concern was a lack of human resources with the necessary skillset to lead such overseas operations (see figure 3.6) (GHRDC, 2010).

Clearly, the management in many companies are well aware of the need to improve training and education so they can cultivate Japanese employees who can work overseas, and this has also led to calls for universities to supply the job market with graduates who have an international outlook and the required skillset. Thus, universities are expected to play a key role in the development of *global jinzai*, as they come under pressure from the business community.

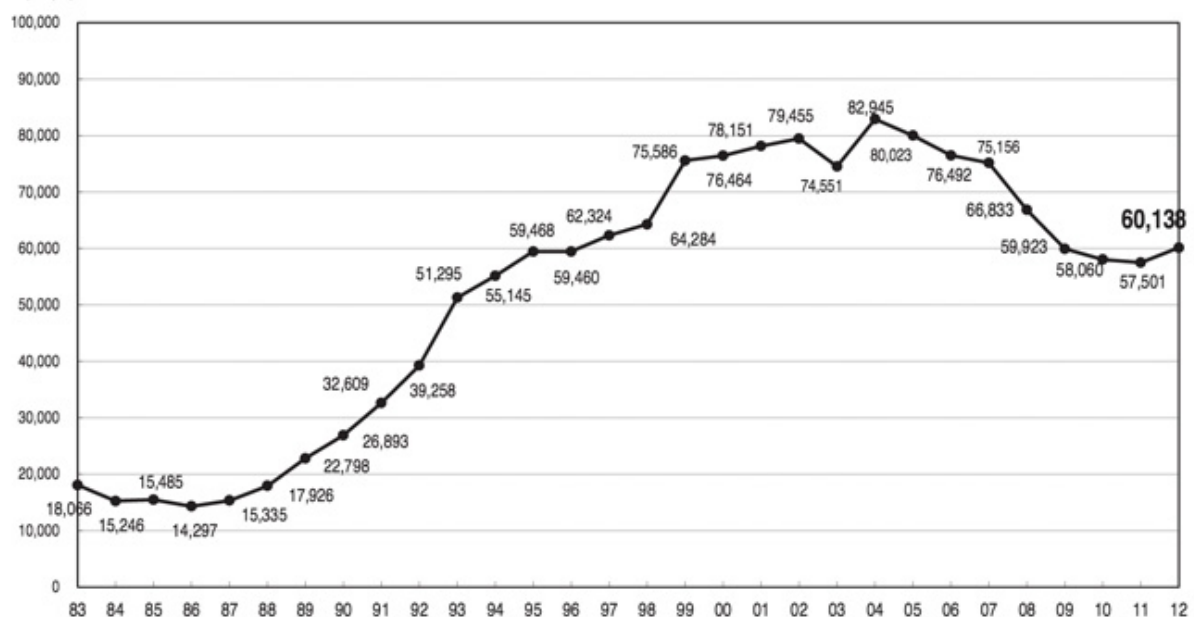
Figure 3.6 Effective barriers to the establishment of overseas businesses. (Translated from GHRDC, 2010, p. 24)



Yet there are many difficulties facing universities in the fostering of these skills. Sending university students on study abroad programs is thought to be the most effective way to boost language skills and increase their receptiveness to foreign cultures, yet the number of Japanese students studying overseas has been in decline of late (see figure 3.7). It had been steadily increasing since the bubble burst in 1991, peaking in 2004, but has since gone through a period of decline. The reasons behind this are partly economic, partly practical, and partly demographic. The high cost of study abroad is a deterrent, which on top of the high cost of a university education is too heavy a burden for many families to take on. After the bubble had burst, with a stagnant job market, overseas study had been an attractive option with limited opportunities at home for new graduates, but now it is

perceived to clash with the job hunting activities that many students begin during their third year of university study (Shimmi, 2016). Rather than an advantage, time spent studying overseas could be viewed as hindrance to employability, if it clashes with the rigid timetable of graduate employment practices that is embedded in society.

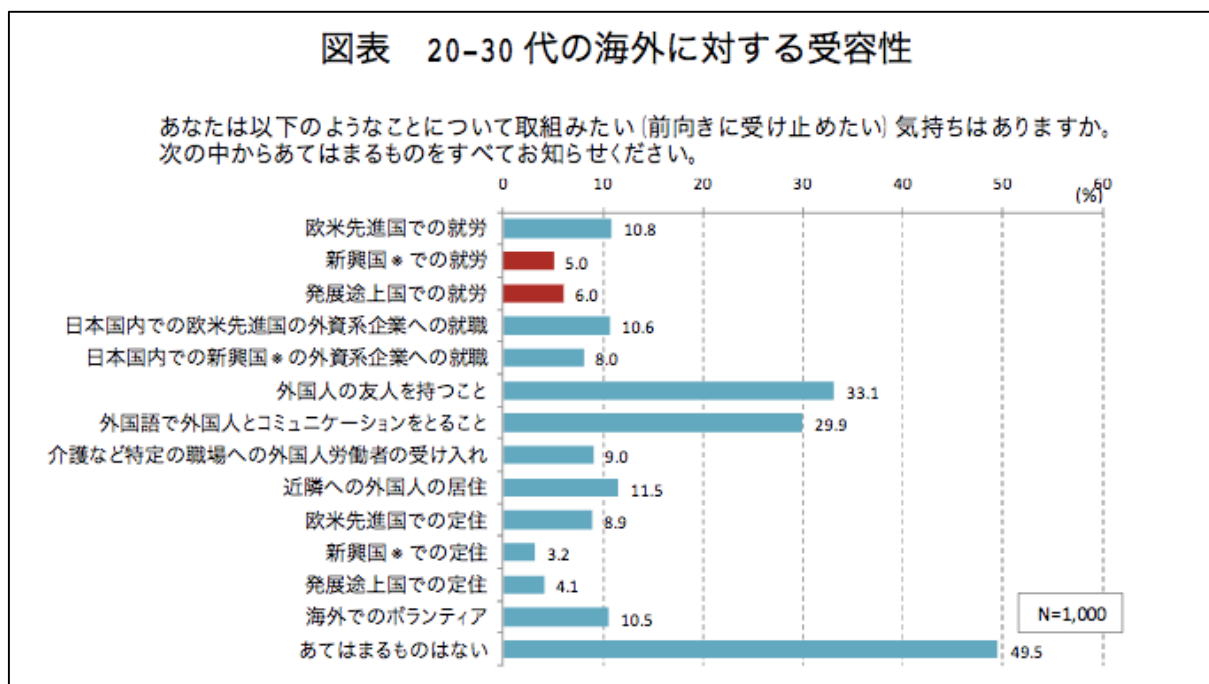
Figure 3.7 Number of Japanese students enrolled in study abroad programs overseas, 1983-2012 (Source: ICEF Monitor)



Demographics are surely also a significant factor. The number of 18-year olds in the Japanese population has fallen from 2.05 million in 1992 to 1.22 million in 2010 (Harada, 2015), so there are also simply less young people, and consequently less young people studying abroad, though this could be actually interpreted as a sign that interest in overseas study is high, with the proportion of Japanese of college age opting to study abroad actually higher than it was in the past.

Nevertheless, the perception in Japan is that the reasons are social: that young people are inward looking, and have less interest in foreign cultures than they did in the past. In a survey undertaken by Nomura Research Institute in 2008 to determine attitudes to foreign countries, 1000 survey participants between the ages of 20 and 30, showed a remarkably low interest in the idea of working in overseas, despite an interest in making foreign friends and being able to communicate with them (qtd. in GHRDC, 2010, p.27). This lack of desire was regardless of whether the destination was a Western country, or an emerging, developing one (indicated in red in figure 3.8).

Figure 3.8 Attitudes toward foreign countries among Japanese, aged 20-30 (Source: GHRDC, 2010, p.27)



Cumulatively, the economic and demographic circumstances and surveyed social attitudes towards globalization highlighted here can be understood as push factors driving

the emphasis on development of university graduates as internationally capable human resources.

3.3 Policies Shaping the Internationalization of Japanese Universities

As detailed in the previous section, although overseas study may be considered an ideal way for Japanese university students to develop the global knowledge, intercultural competence and language skills of *global jinzai*, there are a number of issues that limit the potential for dramatically increasing the number of Japanese students being sent overseas. Certain universities have developed programs that integrate a period of up to a year of overseas study into a four-year undergraduate degree program, and increased government financial support has been made available in the form of scholarships for both short and long-term study abroad (Shimmi, 2016). Students can also obtain funding from other sources including local government bodies, their own universities, and NGOs. While such initiatives do much to enable the ambitions of young people with a desire to study overseas, they are impractical as a larger scale strategy to bring the sweeping social changes that are needed for Japan to face a globalised world, and in another sense, investment in study abroad has a detrimental short-term economic impact, as it sends money and people outside of the Japanese economy.

For these reasons, of the two streams of internationalization observed by Knight (2008, p. 24) 'internationalization at home' can be said to have taken precedence over 'cross-border internationalization' as a strategy in the policies of the Ministry of Education,

Culture, Sports, Science and Technology (MEXT). Additionally, with the two major funding initiatives enacted by the MEXT, Global 30 (G30) (2009) and the Top Global University project (TGU) (2014), it has been observed that the emphasis has moved from an initial focus on the quantitative outcome of increasing the number of international students studying in tailor made programs at Japanese universities, to a more qualitative concern with integration of international programs and the campus wide development of internationalization at Japanese universities (Ninomiya, Knight & Watanabe, 2009, p. 121; Ishikura, 2015, p. 11).

From 10,000 to 100,000, to 300,000

An early initiative toward internationalization in Japan and precursor to contemporaneous developments, is the plan devised under the government of Prime Minister Nakasone in 1983 to bring 100,000 international students to Japanese universities by the turn of the 20th century. Prior to this, national policies toward bringing overseas students to Japan had been limited to the 'Japanese Government Scholarship Program for Foreign Students', established at the end of the postwar US occupation in 1954. Japanese students who aimed to study overseas on the other hand, had mostly done so with the aid of scholarships from their host country, such as the Fulbright scholarship in the US (Ninomiya, Knight & Watanabe, p. 119-120). In 1983, when the Nakasone plan was established, a little over 10,000 international students were studying in Japan, around 2000 of whom were supported by Japanese government scholarships, and the goal of 100,000 was eventually reached in 2003, expanding funding support to around 10,000 students (Shao, 2008, p. 2). The execution of the Nakasone plan in 2003 saw Japan become one of

the leading destinations for international students within Asia. It had set out to: ‘promote mutual understanding and international cooperation with other countries, and to facilitate human resource development in developing countries’ (Ninomiya, Knight & Watanabe, p. 120), and had served successfully to build these ties across Asia, as over 90% of students were from other Asian countries (Shao, p. 4).

However, in some ways the expectations with which the Nakasone plan had been conceived in 1983 had to be adjusted to new realities when they were realized twenty years later, in a more globalized, technologically developed world. In 2008, the government of Prime Minister Fukuda announced a more ambitious plan to increase the number of Foreign students to 300,000 by the year 2020. Yet this new plan was concerned not just with boosting student numbers, but with developing Japanese universities as a catalyst for globalization in Japan:

The need to accept excellent foreign students especially in the fields of science and engineering was recognized and recruiting bright foreign students as part of the research strategy of the university became an important pillar of Japan’s approach to internationalization ... No longer were foreign students thought about in ODA [Overseas Development Assistance] terms, they were now an important strategy to increase global competitiveness. (Ninomiya, Knight & Watanabe, p. 121).

In order to facilitate this new plan, the MEXT, in collaboration with other ministries attempted to overcome challenges faced by students during the 100,000-student plan, by streamlining application, enrollment and immigration policies, offering more support with

finance and accommodation, and assisting international students find employment in Japan upon graduation (Shao, p. 8). Whereas foreign students tended to be thought of as guests when the Nakasone plan was initially conceived, who would most likely return home upon completion of their studies, the number of foreign students being offered employment in Japan after graduation had increased rapidly from 3,778 in 2003 to 10,262 in 2007 (IFSA, 2016). Thus, the MEXT came to see expansion of foreign student numbers as a way of contributing to the globalization of the Japanese economy, rather than solely as a means of developing mutual relationships through a contribution to the development of Asia's emerging economies.

Fostering qualitative outcomes through quantitative targets

With funding to support these aims, the MEXT launched the Global 30 project in 2009, which established degree programs at thirteen leading national and private universities taught entirely in English. In total, 33 undergraduate and 123 graduate English-medium degree programs were established in the five years from 2009 to 2014. Funding targeted the establishment of EMI degree programs, with two aims in mind. One was to attract a larger and more diverse international student population by removing the Japanese language barrier (Ishikura, 2015, p. 12). Although students would be given opportunities to learn Japanese while in Japan, it was no longer a requirement for matriculation or graduation, as students could study their chosen discipline entirely in English. Indeed, the opportunity to enhance English skills through these programs was seen as attractive to many Asian students, who might otherwise have hoped to study in an

English-speaking country, but now had an opportunity to do so closer to home (Yamamoto, 2018, p. 232).

Another aim of these programs was to offer ‘internationalization at home’, and attract Japanese students as an alternative by which they could get many of the benefits associated with study abroad, while remaining in Japan (though study abroad opportunities were also integrated into many of the programs for those who sought to do so). This was seen as an effective strategy in developing globally competitive human resources (Ishikura, p. 12), and allowed students to gain the necessary linguistic skills and intercultural competencies, without any detriment to their chances of participating in job hunting activities.

In 2014, the G30 project was superseded by the ‘Top Global University Project’ (TGU). After an initial increase, the rapid escalation of international student numbers that was being aimed for was not being seen, and in fact remained stagnant at around 140,000 between 2010 and 2014, due largely to reluctance of students from other countries to study in Japan following the Great East Japan Earthquake in 2011. With the prospects of reaching the target of 300,000 international students by 2020 looking slim, the Japan Student Services Organization (JASSO) began to include students at Japanese language institutes in the calculation of international student numbers from 2011. It is largely thanks to their inclusion (whether warranted or not) that the numbers now approach the target (ICEF, 2016; see figure 1.2).

Broader internationalization of Japanese campuses was needed. Although the new EMI programs established under G30 have by and large been considered a success (Yamamoto & Ishikura, 2018, p. 86), the strategy had taken a very narrow focus on establishing new programs at just 13 select institutions. These universities had established EMI programs as an addition to programs already taught in their other schools, which internationalization hardly permeated. Therefore, larger structural educational reforms were not achieved (Ota, 2011). Additionally, despite the aim of promoting ‘internationalization at home’, the EMI programs had focused more on attracting international students, and there were those who felt that not enough consideration was being given to the needs of Japanese students (Yonezawa, 2014).

Therefore, as G30 transitioned into TGU in 2014, the aim and scope was broadened. 37 universities were selected for funding to support internationalization, which were separated into two classes: 13 ‘top type’, and 24 ‘global traction type’ universities. While 12 of the 13 universities selected for the G30 program were again selected for TGU funding, nine of which were in the ‘top type’ class, the program expanded funding to include more private, regional, and specialised colleges. Rather than establish individual programs, the funding aimed to develop the whole university, by setting percentage quotas for international full-time faculty, and Japanese faculty who had received their degrees abroad; percentage quotas of international students among the student body, and of Japanese students who studied abroad; quotas of classes conducted in foreign languages and of students who met standards of foreign language proficiency, and a percentage of Japanese students living in international student dormitories (“Top Global University Project Outline”, 2017):

These numerical targets are easier to measure than other targets, like improving Japanese language education, and were more influential in the selection. These criteria were used in the selection of both types of universities, but some criteria focused on the global ranking of universities and the international impact of research were only applicable to the top type. (Hashimoto, 2018, p. 25)

In this way, universities would autonomously develop their own strategies to meet the criteria to secure funding. This allowed internationalization to be customized to fit the situation and characteristics specific to each institution, so that it could be broadly and attentively integrated. At the same time, it is an irony that while universities needed to develop a more holistic approach to internationalization in order to qualify for the funding, with the aim of achieving outcomes concerned with the quality of their education and research, this was done through use of measures and quantifiable targets. How this affects the quality of education delivered in these schools is debateable. On the one hand, it is claimed that the introduction of EMI and the presence of more diverse student and teaching bodies has led to reflection on the quality of teaching, introduction of new methods, and opportunities for faculty development (Bradford, 2018, p. 9-10). On the other, 'quantitative outcome indicators such as the percentage of EMI classes would be ahead of issues such as the quality of teaching and learning' (Hashimoto, p. 27). As the policy demands are actualized in different ways among the 37 universities receiving funding, more research is needed to look at the impact of the TGU project's requirements within universities.

Competition and stratification

The combined effects of the G30 and TGU projects have brought 'internationalization at home' to the campuses of a select number of Japanese universities. But what of internationalization outside of this group of 37? Including national, regional, and private institutions there are more than 780 universities in Japan, and for those outside of the elite group that are receiving MEXT funding, internationalization has also become an important strategy, albeit for very different reasons. As discussed earlier in this chapter, Japan's low birthrate has led to an aging society in which the number of Japanese of college age has rapidly diminished. Although a larger proportion of high-school graduates are going on to higher education than before, this has led to a situation in which many Japanese universities are facing difficulties in attracting applicants in large enough numbers and of a sufficient caliber. While competition to enter the most prestigious institutions remains fierce, for those not aiming for places at elite schools, university application now involves contemplation of 'the relative attractiveness of competing admission offers from a large number of colleges and universities desperate to fill places and generate enough tuition revenue to avoid bankruptcy' (Kinmonth, 2005, p.106). Therefore, while lucrative funding is a pull factor for internationalization at the TGU's, survival can be seen as a push factor for many other universities to internationalize. The drive to increase the number of foreign students enrolling at Japanese institutions is not just about attracting bright minds from distant shores, but also compensating for the dearth of domestic applicants, sometimes jettisoning standards of student quality in the process (Yamamoto, 2018, p. 231).

Viewed in this light, the universities selected by the MEXT benefit not only from funding for internationalization programs, but from membership of an exclusive club, to which they proudly declare their membership:

‘Top 13 universities in Japan offering degree programs in English’ is a banner headline on the Global 30 website. They identify themselves as ‘top universities;’ readers could interpret the expression to mean the best universities in teaching and learning, the most prestigious universities in Japan or both. (Hashimoto, p. 27).

G30 and TGU, have become badges of honor, emblazoned on banners hung from the facades of street-facing campus buildings, and conspicuous in the online branding of those universities selected to be part of this elite group. The disparity between the universities invited into this club, and those that are not has polarized the existing strata within the sector, while universities outside of the select group are coming under increasing pressure. The gap has been broadened between the elite group of universities charged by the MEXT to deliver the new socially elite *global jinzai*, and those that receive little support for their internationalization efforts, who are competing for the students that remain in a shrinking pool.

3.4 Critiques of Internationalization in Japan

The internationalization initiatives undertaken by the MEXT have fuelled progressive

reforms in the higher education sector in Japan, where previously, even incremental changes had faced strong resistance from conservative elements of the establishment (McVeigh, 2000). While unprecedented and sweeping changes have been made, critiques of the government strategy toward internationalization have been numerous. These criticisms have come from a variety of sources, including Japanese scholars who fear that the identity of Japanese academia is under threat, and those who feel the pace of change has been too pedestrian. Some critique specific aspects of the internationalization drive: The MEXT's emphasis on the importance of university rankings, and inadequate support for foreign students are two issues that have received a good deal of attention. Others question the overall ethos and sentiments behind internationalization. In considering the work of all these scholars, it is worth remembering that in Knight's definition, internationalization is a process. All too often, the critics of internationalization policies treat them as finished products, when in fact they need to be viewed as works in progress.

Critiquing the hegemony of English and the Western academic model

Opposition to internationalization among Japanese scholars writing in the Japanese language has taken issue with the new-found prevalence of EMI at Japanese universities, and ironically comes from a group of scholars who earn a living teaching English at Japanese universities, some of whom hold positions at the TGUs. They take issue with so called *eigo shinkou* ('English worship') and see the spread of EMI as a form of imperialism of the English language (Mulvey, 2018, p. 40). The hyperbolic titles of the papers they have authored in response to the current trend towards EMI give some indication of their sentiments: 'Language as the New Weapon: Thinking about Japan's 'Linguistic Strategies' (Suzuki, 2008);

‘The Time when English Education Perishes: Ideology of Conducting English Classes in English’ (Terashima, 2009); ‘Defend the Japanese Language! On the Need to Enact Laws to Preserve Japanese’ (Tsuda, 2013). It is tempting to dismiss these writings as the nationalistic products of *Nihonjinron* discourse, (constructed theories of the uniqueness of Japanese culture) which cannot imagine the coexistence of the English language and a strong Japanese cultural identity within the Japanese academy. Yet in another sense, what they take issue with is the McDonaldization of university education: they view the dominance of English as a kind of soft power leading to cultural hegemony. While their calls for laws to protect the Japanese language may not be backed up with real substance, they are akin to the French protectionism against the threat of Anglicization, where demand for EMI programs led to calls for an amendment to the 1994 Toubon law, which requires the French language to be used in public life (Racoma, 2013). Yet in the grand scheme of things, their opposition to EMI is on the fringes of the discussion of internationalization in Japan, which receives much broader mainstream support.

Nevertheless, the concerns over an emerging hegemony of English as a lingua franca and the dominant Western academic model among one group of Japanese scholars, are shared by others who are more supportive of the mission of internationalization in general. A number of these scholars have raised concerns about the manner in which internationalization is being carried out, and an issue receiving particular attention is the importance MEXT places on global university rankings. One of the aims of the Top Global University project has been to increase the presence of Japanese universities in worldwide league tables. Annually published global rankings comparing universities around the world with one another are a relatively recent phenomenon, but have rapidly become a dominant

measure of institutional excellence: 'These rankings have given Japanese policy-makers specific evidence to cite, when discussing universities with global standards' (Hashimoto, 2018, p. 16). The first global league table to appear was the Academic Ranking of World Universities (ARWU) published by Shanghai Jiao Tong University in 2003. Two other influential rankings are Times Higher Education World University Rankings (THE), and QS World University Rankings.

The MEXT defines the 13 universities selected as 'Type A: Global Traction type' as: 'Leading universities that are conducting world-level education and research and have the potential to be ranked among the world's top 100 universities' (Top Global University Project, 2017). However, structural and practical changes are needed if Japanese universities are to fit the criteria that are measured and climb the rankings (Yonezawa, 2010). Indicators used to evaluate universities in the rankings include the number of scholarly articles included in Web of Science and Scopus databases (both of which are heavily geared toward English-language publications); number of times that research is cited, Nobel laureates among the faculty, surveys of international image, and the proportion of international students on campus (Ordorika & Lloyd, 2015, pp. 386-391). While each of the three major world rankings have their own methodologies that place weight on some of these categories over others, Japanese universities generally do not compare well internationally in these categories. In 2018, only the University of Tokyo and Kyoto University made the top 100 of the THE list, in 46th and 74th places respectively (Times Higher Education, 2018). Three Japanese universities were on the ARWU top 100 (Tokyo 22nd, Kyoto 35th, and Nagoya 83rd), four on the QS world ranking top 100 (Tokyo 28th, Kyoto 36th, Osaka 63rd, and Tohoku 76th) (ARWU, 2018; QS, 2018). Among other Asian countries,

Japan is competing with top universities in China, Hong Kong, Singapore and Korea for places on a list dominated by American universities.

The dominance of English as the lingua franca of global academia is one reason for this. Until very recently, Japanese academia had: ‘maintained a rather self-sustained, national language-based higher education model’ (Ishikawa, 2009, p. 160). Japanese academics in various fields have traditionally imported Western knowledge, translated it into the Japanese language, taught in Japanese, and published their own research in Japanese. Yet now, with the MEXT placing emphasis on global rankings as barometers of how successfully universities are internationalizing, researchers are under increasing pressure to output their work in English and be published internationally.

Increasing the proportion of international students and researchers on Japanese campuses is another way that Japanese universities hope to improve their ranking, and rankings have an influence over the cross-border movements of students and researchers (Hashimoto, 2018). By ranking among the top research universities in the world they can expect to increase their prestige and compete as a desirable destination for talented international students and researchers (Ishikawa, p. 169). This in turn should serve to perpetuate and boost their placement on future league tables. But by the same logic, if Japanese universities fail to attract high level talent, it would reflect negatively on their ranking, creating a vicious cycle. In reality, it is extremely difficult even for leading universities from regions other than the US and UK to break into the upper echelons of the tables, as year on year, the top ten is dominated by Harvard, Yale, MIT, Stanford, Princeton, Oxford, Cambridge and the like.

As a result, the view that the rankings serve to spread and strengthen the hegemony of English in general, and an American model of higher education specifically, is taken in many countries- not only in Japan. Through the league tables, it is increasingly perceived that: 'a sole model of the university – the elite Anglo-Saxon research institution, and the US version in particular – has been removed from its cultural context and projected to the rest of the world as the 'objective' ideal to follow' (Ordorika & Lloyd, p. 386). It is difficult for those Japanese universities tasked with becoming 'world class' not to incorporate strategies to boost their rankings into their internationalization plans. Furthermore, given the demographic predicament that already amplifies competitiveness and pre-existing hierarchies in Japanese higher education, the emergence of world rankings serves to: 'confirm, fortify, and sometimes distort the existing national hierarchy' (Ishikawa, p. 168). Hence, even those who support the mission of internationalizing the Japanese academy are apprehensive of taking a foreign indicator as an objective yardstick to measure and evaluate their internationalization strategies. As Knight has recently commented: 'A foreign recognition of quality does not speak to the scope, scale or value of international activities related to teaching / learning, research, and service to society either through public engagement or private enterprise' (Knight, 2011, p. 15). Internationalization must be evaluated in Japan more qualitatively, and carried out in a way that recognizes and utilizes the identity of Japanese institutions at the same time as transforming them.

Critiquing nationalism in the discourse of 'kokusaika'

Critiquing internationalization in Japan from another angle are scholars who question whether the MEXTs strategies go far enough, whether there has really been a break with the past, and whether their aim is to be more open and connected to the world, or to protect national identity. Not unlike those concerned with the value being placed upon world rankings, they see a competitive imperative driving internationalization policy, rather than a liberal or transformative one. These, mostly non-Japanese researchers, have been concerned with the discourses surrounding internationalization, and the meaning of key concepts. The Japanese conceptualization of internationalization as '*kokusaika*' has been referred to as an umbrella term under which those with different agendas can collaborate towards the goal of internationalizing education (Yonezawa, 2010, p. 121). Goodman (2007) however, considers *kokusaika* a multi-vocal symbol to stakeholders with conflicting interests, and attempts to unpack this conflict in its ambiguous meaning:

At the same time as some interpreted the *kokusaika* rhetoric to mean that Japanese needed to have a tighter perception of who they were and relay that perception to the outside world, others in Japan took a more universalistic, global sense from the new rhetoric ... differences in approach to the concept of *kokusaika* could be seen as being between pragmatists (such as businessmen) who saw nationalism as an important factor in Japan's economic growth, and idealists (such as academics) who looked towards a genuine global community where people's similarities were more important than their differences (Goodman, 2007, p. 72-3)

The perception is that while a number of versions of internationalism exist in the way that the term *kokusaika* is used, those with political power, who enact

internationalization policies in a top-down manner, are more interested in furthering nationalistic interests than in global community building. Indeed, some see participation in global community as something that is done grudgingly, as a compromise in order to achieve nationalistic aims: '*Kokusaika*, at least in its dominant conservative manifestation, is less about transcending cultural barriers and more about protecting them' (Burgess *et al*, 2010, p. 463). Recent efforts to reintroduce patriotic education and national pride into the school curriculum, provide a stark contrast to the internationalisation policies which are being simultaneously enacted. Hence, it is perceived that those enacting the policies do so with some reserve. Aspinall (2012) describes internationalization as a risk, factored into to the interests of the Japanese government, while Rear (2008), sees internationalization posing a dilemma to government and business interests who demand individuality ('*kosei*') from *global jinzai*, but would rather not have them act and think in an individual ('*kojin*') way:

Maximising *kosei* is important, for the future of Japan depends on developing workers with specific and diverse skills suited to their own innate abilities. Stressing the rights of the *kojin*, however, can lead to undesirable social change and disruption, such as young people choosing to leave their jobs within three years or women delaying the age at which they get married. (Rear, 2008)

Yet while this line of research raises questions about the motives that drive internationalization in Japan, picking apart the ambiguity of Japanese terms in English has a limited potential for furthering understanding. Furthermore, while this research is focussed

on government discourse, the arguments are not corroborated with evidence from an institutional level, to explain how discourse affects students or academic staff.

Having reviewed the objections of those who critique Japan's internationalization from different angles, there seems to be a clear divide between two camps: one concerned that through internationalization policies, Japanese universities are submitting to the hegemony of a Western model of education, and the other which sees internationalization pursued for national rather than internationalist aims. To those who aim to protect Japanese universities from McDonaldization, internationalization is at risk of going too far, while for those who seek a liberal or transformative reform to education, it does not go far enough. Clearly there is a duality and tension between these two positions: between scholars who have different visions of how they would like internationalization to be.

3.5 Chapter Summary and Implications for this Project

This chapter began by charting the development of internationalization as a concept in relation to globalization and as a field of research. Internationalization is a strategy employed at institutional and state levels in response to globalization. While globalization is sometimes depicted as a maelstrom that countries are caught up in, and can have little control over, internationalization is viewed as something that is used as a deliberate strategy to navigate it. Internationalization policy is shaped by globalization but also has the power to shape it. It has been described as a process that is cyclical in nature, for when internationalization policies are brought to fruition, they culminate in a fresh impetus and demand for a new phase of internationalization policy.

In Japan, as economic and demographic circumstances have shifted, there has been impetus for several cycles of policy-making since the 1990s, with two major funding programs that have transformed a selected group of the country's leading universities, with the twin aims of internationalizing campuses through the presence of international students, and nurturing the linguistic and intercultural skills of *global jinzai* in Japanese students. While these policies have led to unprecedented and progressive changes to Japanese higher education institutions, the internationalization drive has been criticised from several angles. Some scholars express concern about the reshaping of Japanese universities to fit the archetypes of Western academia, regardless of whether it is befitting to their identity and situation. Others feel that internationalization is pursued to further nationalistic aims, and those who disseminate policies in top-down fashion have little incentive to fully embrace internationalism.

Locating the aims and scope of this research within the context of internationalization in Japan, the question of the impetus for the MEXT's interest in critical thinking is strongly related to discourses of *global jinzai*. The need for *global jinzai* has been identified as the main impetus driving internationalization policy, based on an understanding of economic circumstances and perceived social attitudes. In response to these, the identity of the *global jinzai* has been constructed as a global business talent that can lead Japan's economy in global markets. The communication, problem-solving and analytical skills described through *gakushi-ryoku* portray the *global jinzai* as a critical thinker, capable of thriving in this world. However, as the influx of international students is also seen as a means by which Japanese students develop intercultural competencies, there

is potential for insights to be drawn from the comparison of attitudes toward critical thinking among Japanese and international students (which is carried out in the q-methodology study in chapter ten).

Furthermore, as this research is inspired by an interest in unpacking the conceptualization of critical thinking in the context of internationalization, clearly it follows a line of enquiry similar to those who have investigated the conceptualization of *kokusaika*. Critical thinking is a similarly contested, multi-vocal symbol, but can at the same time be viewed as an instrument by which the hegemony of a Western academic model is promoted in the Japanese academy. Hence the question of critical thinking's conception as an educational goal and its actualization as an outcome of Japanese university programs, can be located at the nexus of the dualism between these two contrasting positions.

4. Project Methodology and Research Design

As described in the introductory chapter, this research employs three qualitative research methodologies in a 'qualitative multi-method' design, each method specifically selected for, and applied to a different data set. Critical discourse analysis (CDA) is used to look at the mission statements of six undergraduate EMI programs; a thematic analysis informed by the theories of constructivist grounded theory (CGT) is used to analyse interviews with the instructors of critical thinking courses; q-methodology to survey two groups of undergraduate students who have completed courses in critical thinking.

The rationale for a multi-method approach; to combine three qualitative methods, rather than use a single method or a mixed method (that would combine quantitative and qualitative approaches), is to understand the phenomena from the perspective of different stakeholders, using an analytical framework that is tailored to suit each data source. Through doing so, a deeper understanding of the complexity of critical thinking as a concept, and in the teaching practices used in 'internationalized' Japanese universities is possible, as it can be understood from several points of view, that overlap and inform one another. In combination, the use of three methods, each seeking a qualitative understanding, can: "generate richer themes and perspectives on the phenomena; this 'richness' provides a multiplicity of facets within the research project" (Johnson, 2014, p. 119).

This chapter, focuses on the theoretical compatibility of the three methods used in each study. In order to create a clear line of analysis through the work, and allow each of

studies to read smoothly, the methodology of each of the three is described in separate chapters that preface each of the studies. This chapter also includes an overview of ethical considerations, and procedures undertaken in light of potential ethical issues are described. Figure 1.5 (research questions), and Figure 1.6 (research map) in the first chapter may be useful for readers to refer back to, on pages 14 and 19.

4.1 Ideologically Complimentary Qualitative Methodologies

Although the three methods used in this project (critical discourse analysis, constructivist grounded theory, and q-methodology) are each taken from distinct methodological traditions, there are several ways in which they are ideologically complimentary. Firstly, all three of them are qualitative data analysis tools. In the history of qualitative research, the publication of Barney G. Glaser and Anselm L. Strauss's *The Discovery of Grounded Theory* (Glaser & Strauss, 1967) signalled a shift away from the imitation of the scientific method as a mark of rigor in qualitative research; a radical, post-positivist rethinking of assumptions about the nature of theory, and the way in which it can be developed from, and grounded in empirical data (Denzin & Lincoln, 2000, p. 9). Discourse analysis is also a methodology that rose from a need to more qualitatively understand the ways in which language is used functionally. And although q-methodology, is sometimes described as a mixed method, because it uses statistical techniques to factor analyse a set of statements (Ramlo & Newman, 2010; Ramlo, 2015), such an understanding may not be accurate. By definition, mixed method research is not a method in itself, but a way of combining two methods (Tashakkori & Teddlie, 2003, p. 10). Q-methodology on the other

hand is a singular, self-contained set of techniques. Furthermore, the research questions that q-methodologists are concerned with are always qualitative, and the statements that are evaluated by survey participants also take the form of qualitative data. Even following the statistical analysis of collected data, the observations that are made possible are qualitative in their nature. Therefore, a more nuanced explanation of q-methodology might be a qualitative research method that utilises quantitative analysis techniques. Like CDA, or CGT, it is essentially concerned with describing social phenomena: attitudes, opinions and beliefs.

Secondly, all three research methods are in line with a social constructivist worldview, and are suited to an inductive, exploratory research design. They are interested in describing the complexity of social phenomena from different perspectives and the social construction of reality, rather than seeking objective truths. In critiquing discourse, CDA emphasises the role that language plays in construction of the social world, and is interested in uncovering the ideologies that have led to the construction of texts as: ‘representations of aspects of the world which can be shown to contribute to establishing, maintaining and changing social relations of power, domination and exploitation’ (Fairclough, 2003, p. 9).

In developing a constructivist version of grounded theory, Charmaz and others have challenged the positivistic aims of those who ‘discovered’ the method, and whose work became a blueprint for those seeking to use it (Glaser & Strauss, 1967; Corbin & Strauss, 1990). They critique the assumption that: ‘following a systematic set of methods leads them to discover reality and to construct a true, testable, and ultimately verifiable ‘theory’ of it’

(Charmaz, 2000, p. 524). Instead, a constructivist approach is reflexive to the role of the researcher:

We are part of the world we study, the data we collect, and the analyses we produce. We *construct* our grounded theories through our past and present involvements and interactions with people, perspectives, and research practices.

(Charmaz, 2014, p. 17).

Even the pioneer of q-methodology, the British psychologist William Stephenson, who began developing his method for the 'scientific study of subjectivity' in the 1930s -and therefore predates the linguistic, critical, feminist and postmodern turns upon which social constructivism is based- sought to challenge the positivist outlook of other psychologists at that time:

Theories have been presented as *general* propositions, which can be tested empirically for their 'general implications', by way of individual differences. The correct logic, we believe, is that theories may give rise to *singular* propositions, which may be put to empirical test for their proof, disproof or falsification.

(Stephenson, 1952)

Stephenson can be said to have been ahead of his time in this respect. In fact, the growing interest in his ideas and the application of q-methodology to a broad range of disciplines outside of psychology since the 1980s is due in no small part to the common

ground between the method and a constructivist outlook (Watts & Stenner, 2012, p. 42), and its power as a tool to make sense of the complexity of social realities.

Indeed, the three methodologies utilized here above all share their interest in this complexity, yet each can provide but one perspective on it. Each method also has limitations that have been the subject of critique. Critical discourse analysis is challenged for being an inherently politicized version of discourse analysis, that not only critiques the existing social order, but espouses a transformative agenda, which its techniques cannot but support (Breeze, 2011). Grounded theory relies on a 'spiral of cycles of data collection, coding, analysis, writing design, theoretical categorization, and data collection' (Hood, 2010, p. 154) that continues until 'theoretical saturation': the point at which no new codes or themes emerge from newly collected data. However, a problem with developing theory that is grounded in this process is that often the researcher is not drawn to question whether the themes that emerge from the data are actually significant: 'merely because one has collected a limitless number of seemingly identical observations, one has no certainty that generalizing from these observations produces a valid conclusion' (Bryant & Charmaz, 2010, p. 45).

Equally with Q-methodology, despite the 'objectivity' provided through the statistical procedure of factor analysis that identifies patterns in participant surveys, the method is not free from being coloured by the subjectivity of the researcher:

There is risk of bias at the interpretation stage as this task lies with the researcher.

To take the analysis beyond the most basic descriptive and counting exercise

requires the researcher's analytical skills in moving towards hypotheses or propositions about the data (Cross, 2004, p. 210).

However, the combined use of these three methods can provide some triangulation of their results that necessitates for a researcher to reflect upon each of these limitations. The problems highlighted with each method are in relation to the way in which they reach conclusions, yet by comparing and contrasting the conclusions reached in each of the three research phases, the researcher is forced to analyse their own findings more critically. Joining the dots between them, and applying each of their perspectives to the viewpoints taken by different stakeholders, a richer, deeper, multi-faceted understanding of the phenomenon of critical thinking, as a concept and practice in the internationalization strategies of Japanese universities can be aimed for.

Additionally, q-methodology uses the concept of 'the concourse', meaning 'a universe of communications relative to that topic' (Ramlo, 2015, p. 31) which provides a fundamentally different way of conceptualizing social phenomena, as opposed to the 'discourse' or 'narrative' conceptions used by the first two methods. In the third study, the statements that were used to make up the concourse are taken from the mission statements used in the first study and interview transcripts from the second study. This provides a further way in which the three studies triangulate each other.

4.2 Ethical Considerations

This study underwent an ethical review within Osaka University Graduate School of Human Sciences, prior to the commencement of data collection. An application for institutional approval was made, and a proposal submitted in February 2015 to implement the data collection pertaining to stage two (interviews with the instructors of CT courses) and stage three (surveys of students who had completed CT courses) of the research design. After approval was received (reference number 14069), the investigator contacted potential interviewees to invite them to take part in this study. All interviewees were informed that their participation in the study was made on a voluntary basis. Furthermore, they were also told that they were able to decline to participate or withdraw from the study without consequence at any time. If a participating interviewee were to withdraw, any information about him or her collected in the data collection process would be eliminated from the project. All interviewees were provided with an 'information and consent' document prior to the scheduling of their interview, which was signed by each interviewee and interviewer before interviews commenced (a copy of this document is included in appendix 5). A similar document was prepared for students who were surveyed in stage three, which they also signed and which was collected together with their surveys (a copy of which is provided in appendix 6). These documents were stored together with completed surveys in a locked office. Audio recordings of interviews and interview transcripts were anonymized in the naming of files, and stored digitally with password protection. These procedures were deemed necessary, in order to protect the identities of those employed by universities or enrolled in university programs, who agreed to participate with confidentiality, and were carried out in accordance with the Australian Association of Research in Education (AARE)

code of ethics (AARE, 1993). Additionally, the names of institutions have been withheld from all parts of this study. Although, as mentioned earlier in this chapter, it is not uncommon for research using CDA or Q methodology as methods to include the names of institutions in published work, it was deemed necessary in this case, as some of the interviewed instructors in stage two were from the same institutions used in these stages, and naming the institutions would make them easily identifiable. Furthermore, it is felt that anonymizing the names of universities allowed analysis to be conducted and the research to be presented (and hopefully read) with some objective distance from personal knowledge of the specific institutions in question.

4.3 Limitations of the approach

One limitation to the approach taken here is that while the research design incorporates three qualitative research stages, the sample size in each stage may be viewed as rather small, and therefore the generalizability of the findings to describe and characterize a social phenomenon, beyond the idiosyncrasies existing within this particular data set may be limited. Particularly in the first and second research stages, this may be a valid criticism. The critical discourse analysis in chapter six only looks at six undergraduate degree program mission statements. The thematic analysis in chapter eight covers only seventeen interviews. These samples may be considered somewhat small in comparison to other studies that use similar research methods. The question of generalizability of findings is further exacerbated by the fact that all three of the stages are qualitative, and it is

generally more difficult for qualitative findings to be construed as reproducible or broadly representative.

However, the size of data samples in both the first and second research stages was largely determined by availability of data related to CT at Japanese universities. In the case of the critical discourse analysis, the six mission statements were discovered through a thorough process of surveying university websites for terminology related to critical thinking (described in chapter six). These online searches covered all of the 37 TGUs, and based on three inclusion criteria, six undergraduate and four graduate program mission statements met the inclusion criteria, and only the undergraduate programs were selected as relevant and suitable for the purposes of this study.

In the second research stage, interviewees were initially sought out who were involved in the same six programs investigated in the critical discourse analysis, through personal connections and online searches. A total of twelve interviews were conducted with instructors based at these six institutions. The remaining five interviewees were instructors from other institutions who taught CT courses, and these interviews served to determine that a point of theoretical saturation had been reached (that no major new themes emerged when interviewing instructors from other universities). Although there were other professors or instructors contacted at the six institutions who declined to be interviewed, the twelve instructors who did participate can be considered to be representative of critical thinking instruction within these programs, although the manner in which CT is instructed varies among them. In some cases, a CT course was taught by one individual professor, by several professors, or by a group of instructors working under a program co-ordinator.

Therefore, while some institutions are better represented than others in the list of participants, and there may have been opportunities for further interviews to be conducted at the six universities, the state of critical thinking education is broadly represented.

Furthermore, it can be argued that the aim of qualitative research of this type is to seek out complexity, rather than generalizability. Rather than uncover reproducible, universally applicable answers to questions, the purpose here is to provide a rich, detailed and multi-faceted description of the situation in a particular environment. Thus conversely, another perceived limitation of this research could be that it is too macroscopic in focus. Rather than incorporate three research methods, it could more informative to make an in-depth study using just one or two methods. Rather than gather data from a number of universities, focusing on one or two institutions and investigating critical thinking education more comprehensively in these programs would also provide a more detailed, complex picture. However, a case study approach in this manner would allow for even less generalizability of findings, and the multiple perspectives sought from different stakeholders, by the core research questions would not be found. In effect, the research design that has been opted for here aims to strike a balance between a rich, complex description, while capturing multiple views in a way that allows the researcher to explore the topic reflexively.

4.4 Chapter summary

This chapter has described the rationale for selection of a multi-method, qualitative research design. Theoretical common ground between critical discourse analysis, constructivist grounded theory, and Q-methodology has been found, in so far as they are

each governed by a social constructivist worldview, and are suited to an inductive, exploratory approach to qualitative research. In combination and with each method tailored to suit data that relates to three of the major stakeholders in critical thinking education at Japanese universities, they can provide a reflexive, complex and multi-faceted understanding of the phenomenon. Furthermore, the revisiting of data from stages one and two to make up the 'concourse' in stage three, and construct a q-sort survey instrument, serves to triangulate and provide a distinct, inverted view on the earlier findings. Details pertaining to research design and data sampling in each of the three research stages will be provided in subsequent chapters, as clearly and explicitly as possible, in order to outline how each stage of data collection and analysis has been undertaken in line with the principles of each of these methods.

5. Study one methodology: critical discourse analysis

The first study in this project is concerned with core research question II:

How is the concept of critical thinking framed by course administrators, and what role does it play in constructing the identity of undergraduate, EMI degree programs?

This study began in an exploratory fashion by surveying the spectrum of online materials related to critical thinking produced by Japanese universities, before narrowing the focus to the mission statements of EMI undergraduate degree programs. As a result of this process of inquiry, the mission statements of six undergraduate programs were identified and selected for inclusion in the analysis. A set of five questions were devised as a CDA tool based Fairclough's (1992; 2010) proposed model, to evaluate the conception of critical thinking within these mission statements.

As highlighted earlier in chapter two, Japanese universities are under pressure from the MEXT and the business community to deliver programs that develop *global jinzai* with their mission statements contributing to shape education reform discourse in Japan, while simultaneously being shaped by it. At the same time as they are a reaction to government discourse, the statements are outward facing; speaking to students, potential students and the general public. Thus, they have been identified here as essential texts to understand how universities conceptualize critical thinking as their institutional entities are positioned in relation to their key stakeholders.

5.1 University Mission Statements and Critical Discourse Analysis

University mission statements and publicity materials have frequently been the subject matter of critical discourse studies. Indeed, the framework of critical discourse analysis as a method and methodology was pioneered by Norman Fairclough in his work that identified and described the new, market-oriented focus of UK universities in the 1990s following political change (Fairclough, 1993). The marketization of higher education has been a running theme in critical discourse studies since, and mission statements have frequently been the subject of study, used to highlight the pervasiveness of marketization and neo-liberal ideology at universities by researchers in the UK (Connell & Galasinski, 1998; Morrish & Sauntson, 2013), in the US (Ayers, 2005) and in a European context (Svendsen & Svendsen, 2017). In one study of mission statements from the University of Singapore, marketization and internationalization have been linked, as universities reposition themselves from local actors to global, ‘world class universities’ (Zhang & O’Halloran, 2013). Knight has also critiqued the way in which internationalization policies are sometimes exploited for their marketing potential, and this is an area of concern, as internationalization policies become more important to higher education systems around the world:

It is a myth that an international marketing scheme is the equivalent of an internationalization plan. This does not deny the fact that a strategic and successful internationalization agenda can lead to more international visibility, but recognition is not the goal— namely, it is a by-product. (Knight, 2015, p. 4)

In contrast to other types of discourse analysis used commonly in linguistics, CDA develops the focus on the social context of a text (rather than only looking at the content of the text itself) from Halliday's 'Systemic Functional Grammar' (Halliday & Matthiessen, 2014) to view language use as a form of social practice; 'socially shaped but also socially shaping' (Fairclough, 1993, p. 134). CDA practitioners therefore view the discourses produced by universities not merely as documents constructed in a climate of marketization, but as holding the agency to enable and empower it. The mission statements that the universities produce -as tools used to construct the public face and brand of the institution and mediate interaction with society- embody this view of texts as fulfilling social functions. Thus, the frequent selection of mission statements as the raw material for critical discourse studies can be said to be made because they epitomize and underpin the theoretical framework.

5.2 Selection of sample mission statements

As a starting point for this research, it was necessary to explore the terminology most frequently used in the Japanese language to refer to critical thinking. Critical thinking is usually translated in Japanese as 批判的思考 ('*hihanteki shikou*'), but could also be written in katakana (the Japanese syllabary used to transcribe foreign language loan words into Japanese) as クリチカルシンキング ('*kuritikaru shinkingu*'), and the English 'critical thinking' could also be used. Searches of all Japanese websites (sites using the suffix '.jp') and Japanese university websites (using the suffix '.ac.jp') revealed that while 批判的思考 is the most frequently used expression on the Japanese internet, a larger proportion of

websites using the English ‘critical thinking’ came from universities (see table 5.1). This can be interpreted as some indication that within universities, there is an association between critical thinking and the English language, or that there is at least more discussion of critical thinking taking place in English at universities.

Table 5.1. Web search results using different Japanese search terms for critical thinking from Japanese websites (.jp) and Japanese university websites (.ac.jp). (January, 2017).

Search term	.jp results	.ac.jp results
批判的思考	305,000~	96,000~ (31.4%)
クリティカルシンキング	69,100~	10,800~ (15.6%)
Critical Thinking	88,000~	34,500~ (39.2%)

University websites discovered through searches in Japanese and English using the above terms included mission statements for graduate and undergraduate degree programs, promotional and press materials, the syllabi of critical thinking courses, and the personal webpages of professors. However, with Japanese language search results, although these websites came from various universities, there was not necessarily any link found between a university mentioning CT in their mission statement or press materials, and a professor with an interesting in CT or courses particularly focused on it. Where these links were found, was in the English language materials published online for EMI programs at the Top Global Universities (TGUs). It was therefore decided that this study should focus on these international programs, and the webpages of all 37 TGUs were then surveyed in order

to find which had degree programs that particularly emphasized critical thinking as an educational outcome. The following inclusion criteria were used to identify and select mission statements:

- (1) The university emphasizes the importance of critical thinking in the mission statement of a degree program.
- (2) The same mission statement is published online in both Japanese and English.
- (3) There are critical thinking courses being taught within the program.

Six undergraduate and four graduate degree programs were found to fulfill all the above criteria, and because of the MEXT's emphasis on critical thinking skills as a desired outcome of undergraduate programs, it was decided to focus on these. The texts of all six mission statements sampled for this analysis are included in appendix 1. Several have a strong liberal arts focus, and include three programs at national universities and three at private universities. The names of the universities and programs have been anonymized, and are written as '*National University Program 1*' (NUP1); '*Private University Program 2*' (PUP2) etcetera. Although in many critical discourse studies, the names of institutions are openly disclosed, in this case it was deemed necessary to withhold them, as many of the interviewees who were interviewed in the second stage of this project were employed at the same schools. Furthermore, rendering the institutions nameless in the sampled statements, allows for a more objective positioning of the researcher and reader, to evaluate the content of the mission statements in a way that distances them from any anecdotal knowledge of the schools that they may have.

5.3 Developing a critical discourse analysis tool

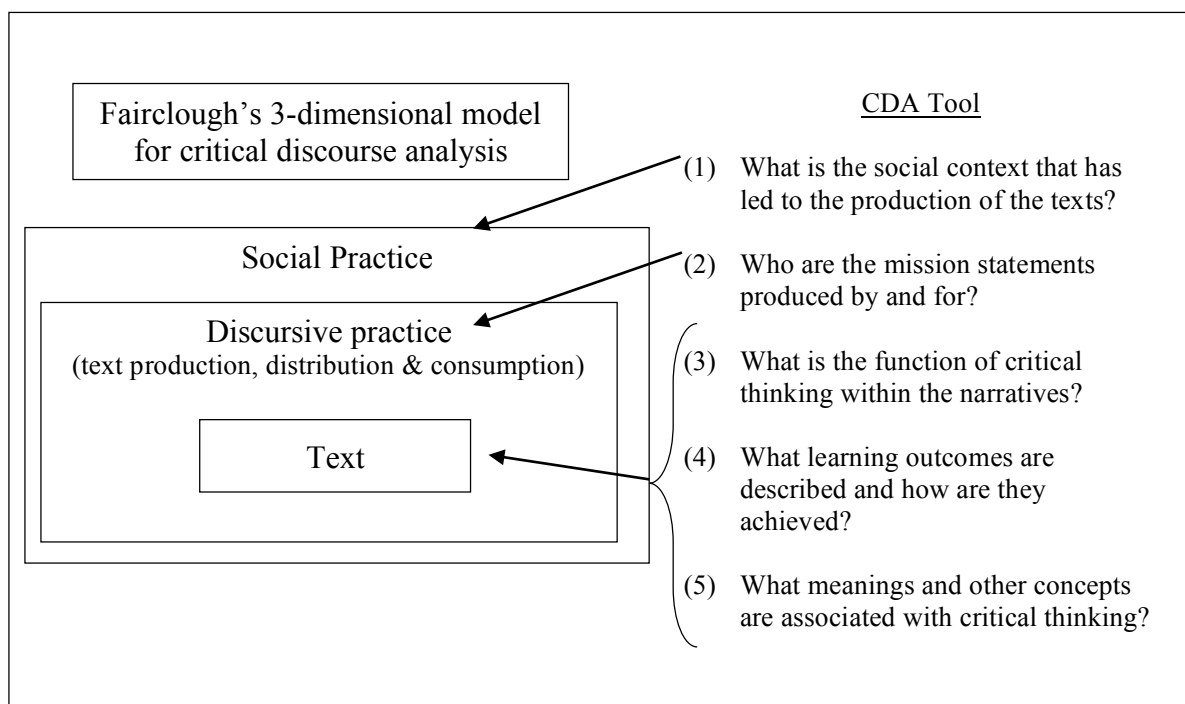
Critical discourse analysis situates linguistic inquiry within a broader social analysis, looking not only at text, but at the discursive practices related to production, distribution and consumption of the text, and the social circumstances ('social practice') within which the text has been produced. Utilizing Fairclough's 'three boxes' framework for analysis of discursive events (Fairclough, 2010, p. 98), a set of five questions was developed to ask of the mission statements:

- (1) What is the social context that has led to the production of the texts?
- (2) Who are the mission statements produced by and for?
- (3) What is the function of critical thinking within the narratives?
- (4) What learning outcomes are described and how are they achieved?
- (5) What meanings and other concepts are associated with critical thinking?

Figure 5.1. illustrates how these questions have been designed to cover the three levels of social context, text production and text, as suggested by Fairclough's model. Following this structure, chapter six begins with a description of the social context that has led to the production of the six mission statements. This is followed by a discussion of who writes mission statements, and who their audiences might be. Questions (3) to (5) turn attention to the texts of the mission statements themselves, and move from a macro view that looks at overall text structure and organization, to the level of sentences and lexis.

Aspects of discourse organization, cohesion, transitivity, modality and word meaning, among categories for text analysis suggested by Fairclough and others (Fairclough, 1992; Gee, 1996, p. 94) can be addressed in an incidental way, within the scope of these three questions.

Figure 5.1. Critical Discourse Analysis tool in relation to Fairclough's 3-dimensional model (Fairclough, 2010, p. 98).



6. Study one: “Cultivating future citizens” - A critical discourse analysis of the concept of critical thinking in Japanese university mission statements

As described in the previous chapter, this critical discourse analysis is structured around five questions that move from a macro view of context, to a micro level analysis of the content of the six mission statements. In this way, the analysis covers the three levels of Fairclough’s ‘three boxes’ (see previous page), and linguistic choices pertaining to discourse organization, cohesion, transitivity, modality and word meaning are covered within the scope of these questions.

6.1 What is the social context that has led to the production of the texts?

Marketization, increased competition among universities, as well as internationalization can be seen as the major factors in the Japanese higher education context that have influenced the production of the mission statements in question here. The marketization of universities that Fairclough and others have observed to be shaping the discourses that universities in the UK and elsewhere produced, can similarly be viewed as a factor in the production of the Japanese mission statements presented in this study. Like universities in the UK, Japanese universities have also been affected by neo-liberal reforms that in 2004 made 88 national universities into financially autonomous ‘Independent Administrative Institutions’ (Goodman, 2005, p.2). This has led to a

restructuring of university finance and faculty governance along managerial and market-oriented lines at many schools. However, two other important aspects, particular to the Japanese context are the aforementioned internationalization drive (described in chapter two) and increased competition among universities caused by demographic change.

Japan's low birthrate has led to an aging society in which the number of Japanese of college age has rapidly diminished. While there were 2.05 million 18 year olds in Japan in 1992, there were just 1.22 million in 2010, and the number continues to fall (Harada, 2015). Although a larger proportion of high-school graduates are going on to higher education than before (particularly, enrollment of female students in four year degrees has increased), this has led to a situation in which Japanese universities (of which there are around 780 including national, regional publicly owned, and private institutions) are facing difficulty in attracting applicants in large enough numbers and of a sufficient caliber. While competition to enter the most prestigious institutions remains fierce, for those not aiming for places at elite schools, university application now involves contemplation of 'the relative attractiveness of competing admission offers from a large number of colleges and universities desperate to fill places and generate enough tuition revenue to avoid bankruptcy' (Kinmonth, 2005, p.106). Under these circumstances, students are increasingly viewed as customers, and the pressure on universities to market themselves successfully has become intense, while mission statements have become an important part of online branding, and a way to distinguish institutional identity.

These conditions can be seen as a push factor for internationalization, coming from within universities. The drive to increase the number of foreign students enrolling at

Japanese institutions is not just about attracting bright minds from distant shores, but also compensating for the dearth of domestic applicants. In this light, universities selected as 'Top Global Universities' benefit not only from MEXT funding for internationalization programs, but from membership of an exclusive club. The disparity between those universities invited into this club, and those that are not has polarized the existing hierarchy in the sector. For those universities chosen as TGUs, it has become a badge of honor, emblazoned on banners hung from the facades of street-facing campus buildings, and conspicuous in their online branding, of which their mission statements are an important part.

6.2 Who are the mission statements produced by and for?

Anonymity of authorship in the texts produced by societal institutions is a theme frequently picked up on in critical discourse studies. In issuing public utterances through an authorless text, or a text whose voice is an opaque, collective 'compound author' (Gee, 2014, p.47), the produced mission statement is simultaneously representative of all concerned with the institution while not being attributable to any individual. As other studies have commented, this narrative style does not:

adopt a particular point of view, express an attitude about the missions or purposes, nor provide any clue either about their authorial origins. It identified to whom the missions belong, but did not reveal *who*, or what body, determined what they were to be. (Connell and Galasinski, 1998, p.466)

As a counterpoint, it can be argued that universities are merely prescribing to the expected norms of a genre; that a different style with an identifiable author would not be fitting in this context. After all, mission statements are written because other universities have them: 'they exist because they are expected to exist' (Morphew & Hartley, 2006, p.458). Yet, to understand why this writing style has become normative, it is necessary also to consider the question of who the mission statements are written for.

While the authorship of mission statements might be unknown, their readership is also ambiguous. On the surface, they are a guidance for students or those considering becoming one as to the values that underlie the school's educational activities. They also serve a purpose of guiding and motivating educators and administrators that the university employs to work towards unified goals. Yet mission statements have other audiences too: they may have originally been written in order to win the approval of an internal board or faculty for a new program, and it is also a requirement to present one to the Ministry of Education for accreditation of a new course of study. Thus, there exists an intertextual relationship between the six mission statements sampled here, and the values of the MEXT, as the statements were drafted as part of the applications that secured the funding to establish or support the programs, and they all echo the graduate attributes desired by the MEXT as expressed through *gakushi-ryoku*.

In another sense, they are also part of a conversation with the mission statements of other universities, and the mission statement of one university can be said to be part of an intertextual chain of mission statements, as universities seek to distinguish themselves from

one another. The six mission statements selected in this study are from university programs that all have a similar focus on the liberal arts and intercultural competence. It is likely that students considering one of these programs would be looking at the others too, and the mission statements provide the universities with an opportunity to nuance and position their educational activities in relation to each other. This is also evident in the texts themselves, and accomplished through the use of cohesive devices: ‘at the same time’ (NUP1), ‘not only ... but can also’ (NUP2), ‘in close connection with’ (PUP1), ‘together with’ (PUP3), ‘further strengthened by’ (PUP3); as the mission statements seek to highlight their outstanding and distinguishing features.

Therefore, mission statements do not have one clear audience, but negotiate multiple audiences, and the scrutiny they come under from these various sources can be understood as a reason for their selection of the authorless voice. Anonymity of authorship is employed as an empowering device, that allows the agenda to be controlled. It gives the texts an authoritative, omniscience that disinclines a reader from questioning (thinking critically about) what they read.

6.3 What is the function of critical thinking within the narratives?

The narrative structures of all six mission statements describe their education in terms of a process moving towards a specified goal. This is perhaps clearest in the paragraph structure of NUP2, which begins by explaining the aim of the program, describes the skills that will be learned, and the goal that will be attained as a result:

NUP2 aims to cultivate future citizens who will not only understand and respect their own country's history and culture but can also adopt an international outlook and a broad worldview, combine specialized knowledge with flexible problem-solving skills, and pair a pioneering spirit with strong critical thinking abilities in order to take on positions of leadership in public life. (NUP2)

Critical thinking is located before the goal is reached in this narrative, as a step along the path, as it is in the other mission statements:

PUP1's "ideal graduate" is a well-educated individual who, equipped with "global competency" (including linguistic skills, flexible and critical thinking, and cross-cultural skills), can serve as a bridge between Japan and the rest of the world. (PUP1)

In other words, CT functions within these narratives as a means to an end, and a necessary component if that goal is to be reached. In both of the above narratives it is implied that CT is absent at the beginning of the process, and acquired through completing it. In two of the statements, the goal of the process is academic excellence, (NUP3 and PUP2). The other four statements describe more abstract goals that will be reached as students go on to participate in society, as in the above examples.

6.4 What learning outcomes are described and how are they achieved?

In all six mission statements, critical thinking is presented as an essential part of a process towards a destination, yet the outcomes that are presented vary. Through becoming critical thinkers, students can:

- Become 'GLocal actors'. (NUP1)
- Take on positions of leadership in public life. (NUP2)
- Come up with constructive solutions for a variety of challenges facing society.
(NUP3)
- Develop global competency. (PUP1)
- Serve as a bridge between Japan and the rest of the world. (PUP1)
- Study effectively. (PUP2)
- Learn to be critical, creative and independent thinkers in English. (PUP2)
- become truly global citizens motivated to act on the world stage. (PUP3)

Critical thinking is constructed as the key to activating a range of potentials, enabling students to take charge of their own destinies. However, there is a paradox here that is particularly apparent when considering the transitivity of the verbs that have been chosen to describe what the universities do:

- 'aims to cultivate self-motivated, reflective students'. (NUP1)
- 'aims to nurture students'. (NUP1)

- 'aims to cultivate future citizens'. (NUP2)
- 'nourishes in them the ability to discern the individual paths they each must follow'. (NUP2)
- 'seeks to foster'. (PUP1)
- 'cultivates the skills necessary to study effectively'. (PUP2)
- 'committed to producing graduates who can use ...'. (PUP3)

'Cultivate' seems to be the favoured choice, among other verbs such as 'nourish', 'foster' and 'nurture' that rather than presenting students as the autonomous thinkers that they describe, treats them as docile saplings being ripened for harvest, or empty vessels waiting to be filled. The text of NUP3 is an exception here, opting for choices such as 'seek to encourage / develop', and writes of critical thinking as something that students 'wield' rather than something they are 'equipped with'. However, in the other five narratives, there is a disparity between the passive positioning of students and their described characteristics.

6.5 What meanings and concepts are associated with critical thinking?

A word cloud generated from the combined texts of all six mission statements to visualize the frequency with which lexical items appear, gives a sense of the weight given to critical thinking in these texts. 'Critical' is the most frequently occurring word after 'students' and is used eleven times, alongside 'skills' and 'thinking'. Other words appearing frequently include 'perspectives', 'flexible', 'creative', 'culture', 'English', 'global', 'issues',

and evaluating information independently. The choice of these words closely mirrors the 13 traits expressed as desirable by the MEXT in *gakushi-ryoku* (see figure 1.1 in chapter one), further evidencing the intertextual relationship that exists between the mission statements and government discourse, highlighting how critical thinking has become an umbrella under which such concepts are amalgamated. However, CT is also constructed as a component of other traits within the texts such as global competency, studying in English, an international outlook and a broad worldview; in short, the attitudes and abilities of *global jinzai*.

As well as the selection of words, it is worth considering the types of cohesive devices through which these concepts are linked together. Critical thinking is often presented together with other skills in three word lists:

‘Informed, critical and multicultural perspectives’. (NUP1)

‘Linguistic skills, multicultural competency, and flexible and critical thinking ability’.

(PUP1)

‘Students learn to be critical, creative and independent thinkers in English’. (PUP2)

Introducing educational outcomes in this way enhances the authoritative voice of the text, and gives an impression of completeness: nothing important has been left out. Serving numerous audiences, there is a need to give a sense that nothing has been missed, and the use of these three word lists could be seen as a kind of triangulation tool, appeasing readers from all sides.

6.6 Conclusion

The six mission statements sampled here have been produced in a milieu of marketization, competition and internationalization that shapes higher education in Japan. They take on an all knowing, authoritative, yet authorless voice that serves to negotiate the scrutiny of multiple audiences. Their narratives are structured to showcase the process by which educational outcomes are achieved, and critical thinking is a key means to achieving this end. Various desirable outcomes are presented, empowering students to lead important roles in the future, yet the texts treat them as passive participants, who need to be nurtured and cultivated: processed by the process. The skills and attitudes that the universities value closely match those desired by the MEXT: autonomy, flexibility, reflexivity, creativity, and a multicultural perspective. These are described as elements of critical thinking. However, critical thinking is not presented as an end, but is itself a component of the global competency and international outlook needed by global human resources (*global jinzai*).

However, it is important that this analysis does not treat the six mission statements as one entity, because there is some variation between them. For example, NUP3 'seeks to encourage' students, rather than 'cultivate' or 'nurture' them, implying that they are in charge of their own education. 'If students are able to acquire mindsets and attitudes ...' (NUP3) suggests that the onus is on the students, and they have a choice in the matter. Contrast this with: 'nourishes in them the ability to discern the individual paths they each must follow' (NUP2), which seems almost fatalistic. Such variances of modality in the texts is suggestive of some difference of attitude among their ghost authors, whoever they may be.

At a basic level, critical discourse analysis seeks to uncover the connections and discrepancies between what people say, what they do, and who they are (Gee, 2014, p.2). While all six mission statements claim to empower students with critical thinking skills, certain discrepancies raise questions about this. The treatment of students as passive recipients leads us to question how students are taught to think critically. Ambiguity of authorship makes us ask how the universities are attempting to position their identity in the face of different audiences. The construction of critical thinking as a means to an end, rather than a goal to be valued in its own right, causes us to wonder what motives drive its inclusion in these texts.

Although the texts speak to multiple audiences, of these the MEXT can be considered the audience they aim to appease above others. This is suggested by the intertextual relationship with the values of *gakushi-ryoku*, and the way in which students themselves are marginalized and addressed indirectly. Critical thinking is taught not for them, but for the development of global human resources. It is an educational aim not for the development of the individual, but for societal goals, and is not a goal for all who enter Japanese universities, but for the globalized elite who graduate from these programs.

The development of critical faculties is a concern for educators and education systems around the world, and the association between CT and the internationalization of education; its appearance in university mission statements is not unique to Japan. The challenges of globalization necessitate intercultural communication, requiring empathic

perspective taking and evidence based judgement. Critical thinking needs to be promoted inclusively, valued intrinsically, and not 'nurtured', but taught so that students are empowered to 'wield' it, if these challenges are to be met.

7. Study two methodology: Thematic Analysis Informed by Constructivist grounded theory

The second study in this project is concerned with core research question III:

How do instructors of English medium critical thinking courses at Japanese universities, conceptualize critical thinking and how is their understanding manifested in their teaching practices?

In reviewing literature on critical thinking in relation to Japanese higher education (chapter 2.4), it was noted that a number of scholars had critiqued the plausibility or efficacy of teaching CT in Japanese universities, based on cultural, political, and sociological challenges. Yet there was a lack of empirical research looking at the actual educational practices being used to propagate critical thinking as an educational outcome at Japanese universities. With a proliferation of courses being taught in English (In EMI programs as well as EMI courses in other types of degree program) that either explicitly set out to teach CT, or state an aim to infuse it into the teaching of other skill or content classes, it seems timely and pertinent to approach the instructors of such courses and interview them, in order to understand how they conceptualize CT, and evaluate the abilities of their students and the effectiveness of their own courses and programs. The aim is to build an understanding that develops from an inductive exploration of the data and consider how philosophical views from harmony seeking Japanese culture, a liberal, conservative tradition of critical thinking, and the transformative agenda of critical pedagogy might be relevant. Grounded theory and

thematic analysis seemed to provide methodologies that suited this objective well, that could inform a theoretical analytic framework.

At the outset, grounded theory seemed to provide the most suitable methodology. However, through the process of conducting interviews, and critically reflecting on the codes and themes that as an investigator, I was constructing from the data, I came to ponder whether the findings pointed toward development of a grounded theory, or were better described as a thematic analysis. As a result, the methods used and the findings of the interviews are an amalgamation of the two. Thus, the research is presented here as a thematic analysis based on the procedures of constructivist grounded theory. This distinction is articulated in the next section, before details are provided about the interview participants, and the manner in which interviews were to be conducted and analysed.

7.1 Constructing a grounded thematic analysis

The impetus for this research originated from a perceived dearth of empirical work looking at the actual practices used to teach critical thinking skills in Japanese universities, despite the existence of numerous theories of the plausibility (and implausibility) of critical thinking instruction in Japanese higher education. By putting these theories aside momentarily, and exploring the sites where critical thinking instruction takes place from the perspectives of instructors, data could be gathered that would provide a thicker description of how the field is contested. In attempting to explore the teaching of CT in Japanese universities, it was important to begin with a clear slate, rather than carry any assumptions

about the challenges posed by CT in this educational environment from the literature into the framing of interview questions and the analysis. Grounded theory, therefore seemed to provide a useful theoretical framework to approach the interviews and their analysis. In its original and most orthodox form, grounded theory advocates delaying a review of literature until after analysis has been completed, so as to avoid viewing data through the lens of preconceived ideas, or 'received theory'. Those who established the methodology, as a revolutionary reversal of the positivistic adherence to the scientific method claimed: 'An effective strategy is, at first, literally to ignore the literature of theory and fact on the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas' (Glaser & Strauss, 1967, p. 37).

Instead, a delayed literature review serves to later confirm or triangulate theories that the researcher has inductively constructed from data. While other, later variations of grounded theory may not necessarily strictly adhere to a delayed literature review, and it may not always be practical to do so within the structure of graduate programs and research projects (Charmaz, 2014, pp. 306-8), the notion of putting aside received theory to build theory out of the data 'on the ground' remains useful and valid.

While grounded theory therefore matches the purpose here to inductively explore the topic, the aim was also to be reflexive and consciously aware of the way in which a researcher frames their own work. With inductive research, it is important for an investigator to understand and be aware of their own role in crafting an understanding of the data. Even an analysis that is developed in a grounded way is *constructed*, rather than 'discovered' in or 'extracted' from data.

While researchers may be driven, and ethically bound to represent the views of their interviewees without distortion, and make constant comparisons to check that their conclusions are supported within the data, they must understand that they are also conduits, channelling the views expressed in the data through their own worldview. This begins during the interview itself, with the framing of questions, and is foregrounded during the process of coding interview transcripts. As well as the choices that are made about what to code and what not to, the codes that are given to information in the data are codes that the author has interpreted to be representative of the data, and constructs accordingly. A code is, in effect: 'a researcher-generated construct that symbolizes or "translates" data and thus attributes interpreted meaning' (Saldana, 2016, p. 4). Aiming to critically reflect upon my own role in this coding process, the coding procedures set out by constructivist grounded theorists have been followed, particularly in relation to initial coding, where active verbs to describe what is happening in the data (process coding) are used. CGT advocates the use of this style rather than the '*in vivo*' coding method originally used in grounded theory research (Charmaz, 2014, pp. 116-124), which would use the actual words of the participants as codes. To do so is seen as an attempt to represent a code as something that emerges from the data rather than the researcher's own construct. CGT on the other hand, recognizes that even *in vivo* codes are researcher constructed. In process coding, the use of action verbs: 'curbs out tendencies to make conceptual leaps and to adopt extant theories *before* we have done the necessary analytic work' (Charmaz, 2014, p. 49).

While reflecting on initial interviews and the codes constructed in the first and second stages of coding transcripts, it became evident that several themes were emerging from the data which would be interesting to explore, yet I questioned whether these could result in the construction of a 'theory' of critical thinking in Japanese universities. As earlier mentioned, for grounded theory research to be conducted in a reflexive manner, it is important for the researcher to question whether the data they are collecting is of actual significance, rather than assume that this must be the case, simply because it is grounded in data. Considering this question, I came to view the themes themselves as the substance of the project, and it would therefore be more suitable to focus on these through a detailed thematic analysis, rather than build a theory out of them.

The similarity of the techniques employed in thematic analysis and grounded theory to code and categorise data mean that there is much overlap between them, and in some cases research design varies significantly only in the nomenclature used (whether the researcher refers to their secondary codes as 'categories' or as 'themes') ("Questions", 2019). The essential difference is that while grounded theory research aims to develop a theory by categorizing codes, a thematic analysis seeks to find a correlation of similar themes through coding of data:

In applied research, our output may or may not be a theoretical model (which comprises a distinction with grounded theory), but as with a grounded theory approach, we are greatly concerned with ensuring that our interpretations are supported by the actual data in hand. (Guest, MacQueen & Namey, 2012, p. 12)

However, even for grounded theory practitioners, what is meant by ‘theory’ has been interpreted in a variety of ways by different grounded theory researchers, and a thematic analysis could also fit within the scope of some of these:

Where is the theory in grounded theory? ... If you peruse articles whose authors claim allegiance to grounded theory, you might identify such varied assumptions that theory means: 1) an empirical generalization, 2) a category or core variable, 3) a predisposition, 4) an explanation of a process, 5) a relationship between variables, 6) an explanation, 7) an abstract understanding, and/or 8) a description.

(Charmaz, 2014 p. 241)

In the end, pursuing the analysis along thematic lines did result in a theory being constructed, but not one that creates a conceptual theoretical model of the feasibility of teaching critical thinking in Japanese higher education, but which instead is something more practical: A logical product of the analysis that is made here was to suggest an approach to the design of a hypothetical critical thinking course, based on the views of instructors about the approaches they find effective in their teaching, and on how the goal of promoting critical thinking in their programs could be better achieved. While this model doesn’t approach the question of the cultural, political, or sociological fit of CT in the Japanese context directly, it can offer insight and relevance to those tasked with designing a critical thinking course or curriculum.

As shall be seen, the views of the course instructors are also shown to reflect the three philosophies that contest critical thinking as a concept in this field, but this cannot be

considered a grounded theory as it used concepts not derived from the interview data. However, the coding procedures used in CGT are nevertheless valid to a thematic analysis, and the method used can be best understood as a thematic analysis based on the procedures of CGT.

7.2 Interview participants

Seventeen interviews were conducted between March 2015 and July 2017. All interviewees were course instructors or program coordinators of critical thinking courses, or other courses such as English language courses focused on EAP (English for Academic Purposes) or CLIL (Content and Language Integrated Learning), cross-cultural communication, and ethics courses that had a focus on critical thinking. All of the courses they taught used English as a means of instruction, some within EMI programs, and others as EMI courses within other degree programs. Initially, interviews were set up through personal connections. Some of those interviewed were former colleagues of the investigator, while others were introduced or found through online searches. These initial interviews led to new connections being made, which resulted in later interviews. In other cases, participants were approached at academic conferences in Japan, at which they had spoken about critical thinking. Details about the seventeen interviewees, are provided in a table in appendix two, though their names, and the names of the universities they work for have been anonymised. Among the seventeen, two were Japanese professors who had undertaken higher education overseas. The remaining fifteen were all native English speakers, from Britain, the United States, Australia, Canada and Ireland.

Initially, the aim was to focus on the same six university programs that were used in the critical discourse analysis of mission statements in the last chapter. Twelve of the seventeen interviewees were teaching in these same programs, and all six programs are therefore represented within the data. The remaining five were instructors of critical thinking courses from other national and private universities. Their inclusion after prospective participants from the six EMI programs had been all but exhausted, served to determine that a point of theoretical saturation had been reached, and that no major new themes were emerging from further interviews with instructors outside of the six EMI programs.

7.3 Interview procedure and analysis

Interviews were conducted in a semi-structured manner. Before each interview, the investigator prepared a set of questions related to six areas of interest, and a list of these prepared questions is provided in figure 7.1. However, the aim was to allow interviewees to take the lead, and allow room to explore the topic, and not necessarily adhere strictly to a pre-conceived line of inquiry. Furthermore, there was a degree of diversity of roles among the interview participants: some were program co-ordinators who had designed critical thinking courses to meet the demands of their faculty's curriculum policy, others were professors who decided independently to teach a course in critical thinking, and still others were language instructors who had been tasked with teaching EMI critical thinking courses by their program co-ordinators. Depending on the circumstances of each interviewee, the

focus of the interviews would differ. Therefore, the list of questions served only as a general guide to the investigator, and the areas of focus in each interview differed to some extent.

At the start of each interview, participants were asked to draw a mind-map on the theme of 'teaching critical thinking at universities in Japan'. Once their mind maps were completed, the interview began by asking them to explain what they had written. Originally, the idea of using mind-maps was simply made as a way to allow the interviews to be participant centred and led, and they served this purpose well. However, the mind-maps also became a useful data source in their own right, and it became apparent that they could be used in the analysis of interview data, as a way of cross-referencing the themes that were found in the coding process. The mind-maps that were collected are discussed in the commentary after the analysis of six themes. Unfortunately, it was not possible to collect a mind-map from all of the interviews, as in some cases interviews were conducted online via video conferencing software, and in other cases, participants found it difficult to draw a mind-map and wished to begin the interview without completing one. Photographs of the twelve mind-maps that were collected are included in appendix 8.

Figure 7.1: List of questions used in semi-structured interviews.

Definitions of critical thinking

1. If a student asks you in class what it means to be a critical thinker, how would you reply?
2. What do you do to introduce the concept of critical thinking in your courses?

Background

3. What kind of experiences do you consider as having shaped your own development of critical thinking skills?
4. What led to your interest in teaching a critical thinking course?
5. Was the decision to run a critical thinking course your own, or was it decided by others?

Course information

6. Is the course an elective or compulsory class?
7. What are the academic backgrounds of students who sign up for the course?
8. Are there many international students in the class?
9. Is there a diversity of academic backgrounds/ nationalities within the classes?
10. How long is the course?
11. What kind of tasks are students given in the class?
12. How are students assessed?

Effective teaching strategies

13. What are student's motivations for signing up for the course?
14. What do you think students expect to gain from the course?
15. What kind of materials and activities are effective for teaching critical thinking skills?

Challenges

16. What is difficult about teaching critical thinking skills?
17. Do students maintain their motivation throughout the course?
18. If students lose motivation, why do you think that happens?
19. What do students struggle with during the course?

Course evaluation

20. Overall, how effective is the course in meeting its goals?
21. What can students do better by the end of the course?
22. What would you like to improve about the course?
23. What changes in the university program could improve the development of student's critical thinking skills?

7.4 Coding of interview data

A more detailed, illustrative description of the coding process is provided as part of the analysis of theme one in the next chapter. Coding was completed in three stages in order to develop themes from the data. Audio of all interviews had been recorded digitally, and these recordings were transcribed beforehand. The initial coding stage used a 'process coding' method, in which active verbs are used to 'connote observable and conceptual action in the data' (Saldana, p. 296). The second coding stage employed is focussed coding, in which initial codes are categorized according to their meaning or topic, and their relation to each other. The construction of categories in this way aims to be 'more analytical and theoretical than the initial coding because it requires the analyst to reflexively interact with the data and the active codes' (Johnson, 2014, p. 123). Thirdly, axial coding aims to move from categories to themes, by drawing broader connections between categories. As a result of this stage, six themes emerged from analysis of the data, and the next chapter is organized around these six themes.

8. Study two: “I think it’s like swimming- you have to get in the pool” - critical thinking constructed through interviews with EMI course instructors at Japanese Universities

In this chapter, the analysis of the interview data is presented. Six themes were developed through three stages of coding, and here, analysis of these is made in turn. The six themes that interviewees expounded upon were (1) perceived factors influencing the development of interviewees own interest in critical thinking, (2) defining and describing critical thinking, (3) beliefs and approaches to teaching critical thinking, (4) student motivation to learn critical thinking skills, (5) obstacles, effective strategies and outcomes of critical thinking courses, and (6) views on the role of critical thinking education in Japanese society. All of the 362 initial codes generated from the 17 interview transcripts were sorted between 60 categories, which all in turn fitted within the scope of the six themes. With the themes presented in the order above, the first three can be seen as related to instructor’s personal beliefs, whereas themes four, five and six are concerned with their views of students. A complete ‘codebook’, showing all codes, categories, and themes in a tree diagram is provided for reference in appendix seven.

Coding stages and procedures were only briefly described at the end of the last chapter. In presenting the analysis of the first theme, a detailed example of this coding process is provided, to illustrate clearly and explicitly the procedure by which each theme has been arrived at. The sections detailing the six themes make frequent reference to direct

quotations from the interview transcripts, with the aim to foreground as much as possible the views of the educators who were the subjects of the interviews. The intention is to be transparent and provide a platform from which to showcase their views directly. These six sections are followed by a commentary, in which interpretation and analysis is made across the six themes, and the mind-maps are used to corroborate them. Through analysis across the themes, a model is constructed to show the interaction of the different ideologies that contest the field.

Finally, in concluding the chapter, a theoretical description of the ideal circumstances needed for a course to promote critical thinking education at Japanese universities is presented, based on the findings of the views of the interviewees. This description can be viewed as a practical set of recommendations: a guide that instructors and program developers may refer to.

8.1 Theme 1: Perceived factors influencing the development of interviewees own interest in critical thinking

During the course of the interviews, participants were asked to contemplate how their own interest in critical thinking came about, and speculate as to how their own critical thinking faculties had been shaped. Figures 8.1 and 8.2 on the following pages show a selection of initial codes, together with quotes from the transcription passages that each code was used to label. These codes illustrate the active verb emphasis and the focus at this stage on merely creating descriptive labels, rather than trying to make or impose any

interpretation of what is being observed in the data. While working at this level, the focus is on making a description of the action happening in the data. In order to inductively construct theory that is grounded in data rather than deductively force pre-formed ideas onto the data, codes are constantly compared to each other and to the raw data, checking that the descriptions offer accurate and concise summations of the data segments. At this stage, each initial code had been allocated a number merely for ease of reference. These numbers do not rank or rate the codes for frequency or perceived importance in any way.

The eight selected quotations below give some illustration of the diversity of ideas and backgrounds among the interview subjects. They show the numerous, contrasting and even in some cases contradictory ways in which they perceive the experiences which have shaped their awareness of critical thinking and their own critical faculties.

Figure 8.1. Interview excerpts with initial codes: critical thinking through educational experiences.

○ **Describes learning CT through study of intercultural communication. (code 149)**

I had to take a course in cross cultural communication and think that is what really like got me thinking about you know, asking questions, and assumptions that we have about certain races, certain genders, certain socio-economic backgrounds. So challenging assumptions. It wasn't necessarily like, labelled as critical thinking, but that is what kind of introduced it and developed my disposition. (Interview 6)

I was researching on intercultural education and er, at that time I was in England. Yeah, that's my research topic ... I was researching intercultural communicative competence which my supervisor defined. One of the most important elements of intercultural communicative competence is, he defined it, you know, critical cultural awareness. And then therefore I had to research critical, being critical what is being critical. And then there are many, sort of terms using the word critical. You know, like critical pedagogy. So criticality, so just criticality issue came up as er, as my research field so you know that's why I had to work on this and I started having more interest in it. Yeah. (Interview 9)

○ **Describes learning CT through studying law at university. (code 281)**

I studied law at uni., and one of the reasons why law values critical thinking is because sloppy thinking is dangerous. We base most of our life decisions on what we think, so if our thinking is messy and unstructured, our life decisions are going to be messy and unstructured. (Interview 10)

○ **Thinks CT learned at university, not from home environment. (code 334)**

I would say it came through education. My experience at home... I was always envious of people who come from a background where they just talked politics at dinner or actually talked about stuff because we didn't. And my experience at home was Dad shouting at the TV -mostly at members of the Tory party- and I was very much in the same mould when I went to university and very much thinking of things in black and white. And so, maybe firstly realising actually I didn't know anything about anything and that there was no black and white, there's just lots of shades of grey came through university education, through readings, literature and other things. Yes, maybe that experience. Yes. (Interview 11)

Figure 8.2. Interview excerpts and initial codes: critical thinking through non-educational experiences.

- **Thinks discussion with family gave a critical outlook. (code 131)**

I come from a family that in a very positive way like to disagree about things. I wouldn't say we are always arguing about politics, or something, but I would discuss things I read about a lot and my parents always encouraged me not to just accept things. (Interview 5)

- **Describes emphasis on rote-learning at university. (code 175)**

Well I certainly didn't learn it in college. I'm 71 years old, so um. I'm talking about education from the 1960's and 70's. And er, it was basically fact based. And, in my undergrad degree in bio-chemistry I had to learn a lot of facts, which 95% I've forgotten now, and the processes I've learnt were more, chemical or from physics or from math. And then in professional school we just learned a lot of clinical procedures. (Interview 9)

- **Considers experience in business to have shaped own CT. (code 176)**

I'd say the majority of it was, of my critical thinking skills came from er, I started er, a real estate investment business. Um. And, so that experience of investing money, and analysing profit and loss. Market potential, um. That, required good critical thinking. (Interview 9)

- **Thinks own CT came from travel experiences. (code 286)**

From travelling. I think it came from travelling- and so, after that, yes. You can't have any prejudices because everybody's different, and people do different things in different cultures. I was never a little Englander, but travelling's made me both a lot more accepting and a lot more questioning. (Interview 10)

Consideration of these differences became important in the second coding stage, focused coding, in which the initial codes were allocated to categories according to similarity of meaning, and relation to each other. In this stage, coding moves from being a purely descriptive exercise, to an analytical and interpretive one, and at this point, the

subjectivity of the investigator comes into play to a greater extent. The resultant categories enable the initial codes to be explored, played with and repositioned in relation to each other, in a way that is not possible when working only with several hundred descriptive codes. The following list shows how the seven codes in the selected examples above (among others) were assigned to four categories in this focussed coding stage:

- **Acquired CT through study experiences (category 1)**
 - Describes Learning CT through study of intercultural communication. (code 149)
 - Describes learning CT through studying law at university. (code 281)
 - Thinks CT learned at university, not from home environment. (code 334)
- **Acquired CT through upbringing (category 2)**
 - Thinks discussion with family gave a critical outlook. (code 131)
- **Rejects impact of education on own CT (category 3)**
 - Describes emphasis on rote-learning at university. (code 175)
- **Acquired CT through life experiences (category 4)**
 - Considers experience in business to have shaped own CT. (code 176)
 - Thinks own CT came from travel experiences. (code 286)

Although the above is but a small sampling of a larger set of categories and codes that together make up theme one, it is illustrative of how categories and codes create onion-like layers through which the data can be observed and analysed, and the frequency with which codes occur only tells part of the story.

The four quoted excerpts shown earlier in figure 8.1 together combined to make up category one, as they all express the view that the interviewees developed their interest in critical thinking through tertiary level studies (though they refer to various subject disciplines). This was the largest category within theme one, and is made up of fifteen instances of eight different codes. By contrast, the four excerpts shown in figure 8.2 relate to a more disparate collection of codes that made up the other three categories making up theme one, that all refer to non-educational factors. The codes falling under these three categories were used only a total of seven times.

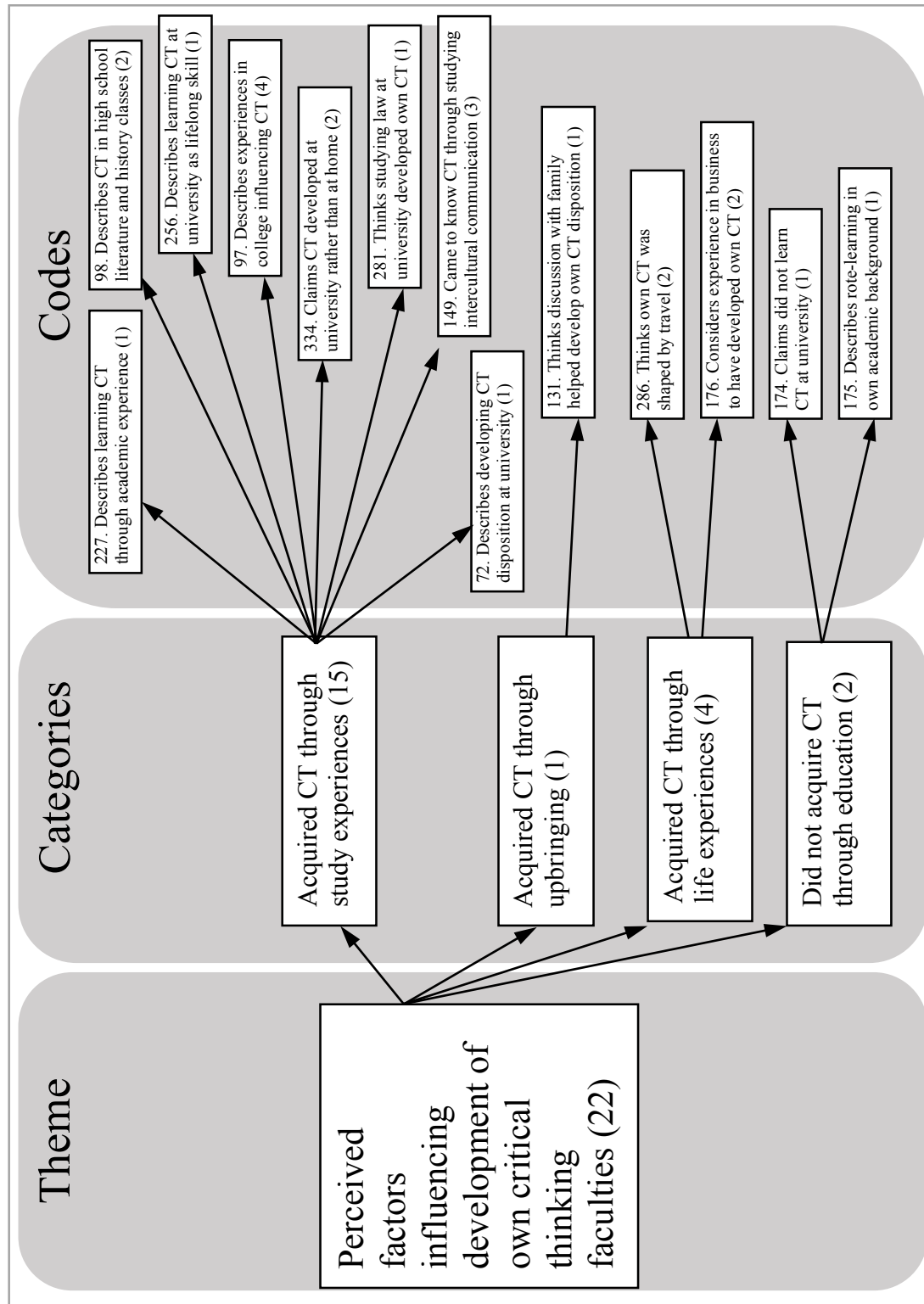
It is clear that, greatest weight within the whole body of data supports the notion of learning critical thinking through study experiences. While it is also important to note the presence of views to the contrary (see category three), among the interviewees, many clearly considered their own experiences of higher education to be pivotal in shaping their critical faculties.

Yet looking at the earlier cited examples at the level of raw data, it is also possible to make a connection between the two quotes that relate to the study of intercultural communication in category 1 (under code 149), and two quotes related to travel experiences in category 4 (code 286). The view that experience of different cultures could be a significant trigger, that has lead those interviewees to think critically about their own assumptions is also notable in the data. For theme one therefore, it can be concluded that among the selection of views, study experiences have held the most significance to the interviewed instructors, and intercultural communication is also identified as a potential

trigger. Figure 8.3 shows the complete set of codes and categories that make up theme one in the form of a diagram.

Theme one has been chosen to provide an example to describe the coding process used in this analysis, partly because there was a smaller number of codes and categories to work with than for the other themes, and this therefore allowed for the description to be presented in a simple way. The other five themes generally received much greater attention in the interviews, and the codebook in appendix 7 shows a greater level of complexity for these, yet the analytical process that has been used to construct them is the same. Although the topic of background influences to the instructor's own critical thinking development was approached almost as an aside to the other topics that the interviews focused on, they help to portray something of the identities of the interviewees, and show the diversity of views within the group. Furthermore, as shall be seen in the analysis of later themes, there are certain parallels and paradoxes arising from the identification of academic and cross-cultural experiences as the most influential factors in their 'awakening' as critical thinkers.

Figure 8.3. Categories and codes used to construct theme one: Factors influencing development of instructor's own critical thinking. Numbers in parenthesis indicate frequency with which codes were used.



8.2 Theme 2: Defining and describing critical thinking

As an interview topic, the question of how interviewees defined the concept of critical thinking was broached by asking how they would explain it to a student, or whether they ever attempt to provide a definition in the first class of their courses. Many of those interviewed expressed misgivings about using textbook definitions of the concept, or a hesitancy to directly explain what critical thinking means to their students:

On the one hand, I want to provide some clear guidelines for what this course is gonna be, but on the other hand I don't like to come up with these kind of, textbook definitions of CT, cause I've got a lot of misgivings about, about how this is presented as a kind of, almost like a sub-discipline. (interview 7).

I don't want to start with that because I, I'm pretty sure these, my students, their eyes would sort of glaze over and say, "what the heck's he talking about". (interview 9).

As a means of conveying the concept (and the purpose of their course), most instructors expressed a preference for demonstrating critical thinking through practical exercises, rather than attempting to offer their own explanation of its meaning:

I mean, I always flip it around to begin with – so get them to actually write down and discuss what they think it is, and then we look at the ideas that they come out with.
(Interview 5).

Participant: *my approach is ... to ... rather than trying to define it, with words ...
um ... In the first lecture, I will give them ... the format of the course, and the topics
and the objectives and that sort of preliminary stuff. And ... I want them to ...
actually start to do some critical thinking. So I guess um ... my underlying thinking is,
swimming.*

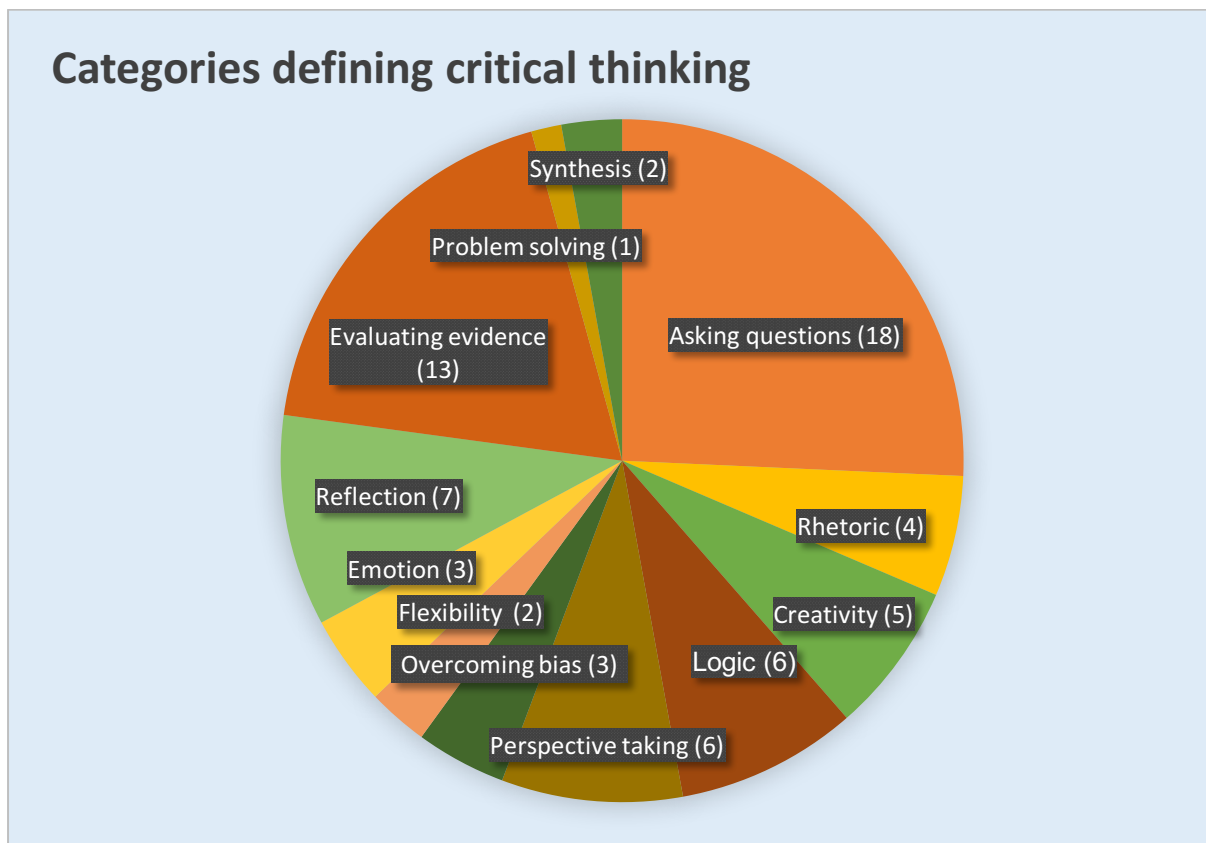
Interviewer: *Swimming?*

Participant: *Yes. I was ... someone told me or I heard a long time ago that you don't
learn to swim by reading a book or listening to a lecture. And, so I don't think you
learn critical thinking by reading a book or listening to a lecture. I think it's like
swimming, you have to get into the pool.* (Interview 9).

Despite several expressing this reluctance to introduce definitions in the classroom, in the interviews, the interviewees all spoke in great detail about how they conceptualize critical thinking and emphasised it in relation to a number of other concepts. The importance of asking questions, rhetoric, creativity, logic, perspective taking, overcoming personal bias, flexibility, emotion, reflection, problem-solving, synthesis and evaluation of evidence were identified as twelve categories to sort all of the codes concerning the aspects of critical thinking that were discussed. The pie chart in figure 8.4 shows proportionally the frequency with which these categories appeared in the data. Again, the frequency with which codes appear does not tell the whole story, and as concepts, there is also a degree of

overlap between some of these categories, such logic and evaluating evidence, or reflection and synthesis.

Figure 8.4. Pie chart showing twelve elements of critical thinking identified in coded data. Numbers in parenthesis indicate the frequency with which codes were used in each category.



Nonetheless, it is very clear from the chart that asking questions, and evaluating evidence were emphasised by the interviewees over other attributes, and these two categories accounted for nearly half of the total of 70 codes. Not only was asking questions the aspect of critical thinking that interviewees identified most often, but the way in which

it is spoken about shows that many of the instructors consider formation of a 'question habit' to be the fundamental purpose of teaching critical thinking:

I think central to it- as I have on my map here- is that questions are the heart of everything, right? Critical thinking is questioning things. Asking the right questions is a sign, I think to good critical thinking. (Interview 1)

Basically, I would explain it as not accepting something as it is. I mean asking a lot of questions. Not necessarily challenging, but asking a lot of questions to clarify points, but also sometimes to challenge. (Interview 6).

Ask questions, question everything, evaluate and analyse all the information presented to you, search for other sources of information, evaluate it and then come to a judgement. And then, question that judgement to see if it's right, then test that judgement against other ideas. (Interview 10).

I try to get my students to look at the work they do in college in that way. In one sense, you want to constantly have this why question in mind. (Interview 16).

Evaluation of evidence is also identified as a fundamental aspect of critical thinking. As they often use academic articles, news reports and editorials, or other types of media to bring discussion topics into their classes. In many courses, critical thinking is essentially practiced through looking at texts and questioning the claims that are made, evaluating the strength of supporting evidence, testing hypotheses, or making inferences about

information that might be absent or concealed. As much time in class would be spent on these activities, interaction with text and evaluation of evidence are emphasised as central aspects of critical thinking through the interviews:

What I am looking for is this: looking beyond what is simply written or said for the motivation, for why it was written or said and also, what is the writer trying to achieve through that and also the strength of the argument. Like if you're looking at an academic piece or a factual piece, then is there evidence to support the claims.

(Interview 5)

For me, CT broadly conceived is about, methods of analyzing or coming to decisions about what constitutes truth and how claims for various kinds of truth are made, so in my teaching and in my course, coursework er, you know this is kind of the idea I come back to all the time. (Interview 7)

From the remaining categories, the view that CT is not merely a receptive reading skill, but also important as a productive skill was emphasised when interviewees talked about creativity and rhetoric. As courses are frequently assessed through essay assignments and presentations, instructors viewed the analytic process also as a skill that students need to apply to their own rationale, as they self-monitor their own spoken or written output:

I don't want to say something like you know, think outside the box, but in a sense, that is what critical thinkers will do. That is where the creativity comes from. Again,

I was always quite frankly baffled by people who were just saying critical thinking you know, is a kind of cold logic, and lacks creativity. (Interview 1).

For me, my personal take on what constitutes critical thinking or how to teach critical thinking or, these kind of things, it's about rhetoric ... So, under this one for rhetoric I've put argument and persuasion. So, I do a lot of stuff about, for example, how to identify good arguments or how to construct a better argument whether that's a student essay or a, maybe it's a presentation. (Interview 7).

Essentially, when you ask yourself where do new ideas come from, that's a critical thinking process. Um, generating new ideas. (Interview 9)

This understanding of CT as important to evaluating your own thinking processes also relates to the categories of synthesis and reflection, where CT was further emphasised as a meta-cognitive skill:

Certainly, I would say that critical thinking involves this element- as you are thinking about something you're evaluating, you're analyzing what you're thinking about. It can't be static, critical thought would mean that it has to be changing and there has to be that element of philosophy to it, there has to be thinking about the thinking, to be aware of your thought process or how you're reaching decisions or why you're holding the views that you hold. (Interview 3).

8.3 Theme 3: Instructor beliefs and approaches to teaching critical thinking

On the theme of approaches to teaching critical thinking, the categories that emerged from interviews could be separated into four areas: 1) views on how to effectively teach critical thinking; 2) views on the role that instructors play in class; 3) selection of suitable topics and class materials; and 4) assessment strategies. Each of these areas is explored in turn below. Considering the diversity of backgrounds of the instructors, it is notable that their views on these areas showed a strong degree of unanimity. Some were scholars, teaching CT courses in relation to their areas of academic interest, which included psychology, ethics and cross-cultural communication. Others were language instructors; whose focus was on developing their student's academic English skills. Nevertheless, their beliefs, and the approaches they took to the challenge of teaching critical thinking skills were similar in many ways.

Critical thinking as a learnable, practical skill, acquired through experience

On the topic of how critical thinking classes should be approached, three views emerged as categories from the data: That critical thinking can be learned; that it is a skill best acquired through experiential learning, and that it should be emphasised as a practical life skill. Most instructors were positive about the potential for their students to develop and improve their critical thinking skills through undertaking a course, given the right circumstances:

I think given the opportunity, if you set up the situation, give them all the pieces and you give them a, sort of an engaging topic, they step up. Anybody can be a critical thinker. (Interview 9).

The view that students can't do it I would dispute. I just think students need to be trained to do it ... Normalising a different way of communication. Normalising asking questions, normalising disagreement and all those things. I think it totally can be taught. (Interview 11).

Instructors also viewed critical thinking as a skill attained through experience, and improved through practice:

It's just like learning a language. You can teach them the rules, but until they actually start using it and putting it together, until you actually start producing it, you are not going to get better at it. It's like painting you know. If you paint a picture and it is crap, right, and then you give up, well then you are always going to be a crap painter, but most people that keep practicing it will get better. Critical thinking, I think is no different. (Interview 1)

Again, I get back to the analogy of how do you teach swimming. You go to the pool and get in the water. And then maybe after you've been in the water and swam a little bit and struggled, then I would say "Ok this is what you've learnt so far and this is how we can refine your skills", but it is an experiential skill-based, or process-based type of learning. (Interview 9)

Approached as a process in this way, critical thinking skills need to be taught through iterative cycles, each one building upon the previous one, in a structured, scaffolded way, in order to familiarize students with thinking processes. Through repetition of these procedures in exercises, students develop the ability to use their skills with greater automaticity. In turn, this allows instructors to reduce the amount of control and structured support, and simultaneously introduce more challenging materials with less obvious flaws in the arguments:

Everything is about a repeatedly, kind of deepening process and repeated iterations of that process, so you have first just comprehending the input then getting some of the implications in synthesis with other readings, other discussions they've had. Once that is in place to some degree then it would be- in a class there would be a lot of group work: discussions, collaborative projects, something like that, and then the critical thinking really comes from being able to reflect on that- to evaluate or analyze what they've done before going back to do it again- whether in the same or a slightly different form. (Interview 3).

There are different stages- first reading, comprehending, then identify what the writer is trying to argue. Then okay, how logical are those arguments? Look at the evidence, look at what is not in there. So for me I suppose, it involves teaching a structured approach- like what are the stages you need to go through to achieve a critical analysis. (Interview 5)

At first, I always pick out really, you know, controversial topics, as shocking as I possibly can, because I think it makes it a bit easier for the students. But later on, I give them much more subtle, much more nuanced kinds of materials, much more difficult for them to, to kind of challenge these. (Interview 7)

Thirdly, the teachers favoured presenting critical thinking as a practical life skill, emphasising the ways in which people need to use it in their daily lives, rather than as an academic skill which would benefit them in academic work:

Critical thinking will allow you to, I think, operate in life more effectively because it is not just an abstract academic topic. It's about everything. Most of the critical thinking that you are forced to do frankly is everyday thinking, like dealing with advertising and you know again it almost sounds like a sales pitch but why wouldn't you think that it's something you can use every day? (Interview 1).

I constantly reiterate this. I would say things like, you know, some of this may have direct application to your careers or scholarship or whatever, but a lot of this, you know, what I want to focus on, this has direct application just in your day to day lives. So just for example, if, if you don't really have some sort of ability to distinguish, you know, a sort of an appeal to an emotion, when somebody's trying to get you to do something, well basically you're allowing yourself to be controlled by other people right? (Interview 7)

The instructor's role in class

Guided by these beliefs and their desire to take a practical, experiential approach to the learning process, instructors tended to view their own role in class as that of a facilitator, rather than lecturer or 'expert'. They tended to play down the value of their own knowledge to students, and aimed to guide or advise them, rather than shape their beliefs:

The teacher's job is to just basically help them pause and reflect. A teacher is not necessarily any smarter than the kids They are just, they are just older and they are giving them their experience, right? All I'm trying to do is add something to help them learn. The learning process is to help the students to scaffold basically and help them. You know, sometimes they are just like, "can I do this? is this invalid if I ask this question?" You have to encourage an environment where, yes you can, in fact you should, test every question. (Interview 1).

Ideally yeah, the teacher would be, I guess this would be a teacher as a facilitator or coach, more than directly teaching. The idea with critical thinking is that it has to be something that someone develops at least partially on their own and is able to do increasingly independently, so as this process is repeated more and more and as they do it more and more, the teacher should be able to step back more and more as well. (Interview 6)

Therefore, the instructors tended to view their responsibility in class as primarily that of creating an environment in which discussion is promoted, and fostering modes of

communication conducive to asking questions. Along the way, they would observe, offer advice and feedback, and create opportunities for students to pause and reflect.

Topic and materials selection

Several instructors expressed dissatisfaction with the range of materials that are commercially available for teaching CT. Many challenged the cultural appropriateness and relevance for university students in Japan of materials published in western countries that are specifically marketed to teach critical thinking, but also those working as language teachers felt that language teaching materials which claimed to promote critical thinking didn't do so effectively:

It's pretty Eurocentric. In fact, it's very Eurocentric. We always start with Aristotle and Socrates, and I find a lot of the... I don't see the relevance to them, to their lives, to talk about critical... It's always very, very abstract. But then I was looking at an American junior high school text on critical thinking, and it's just too basic ... I haven't found any appropriate content yet to teach a young person in their second language. (Interview 10).

In the textbook, some of the textbooks, it says that this is a critical thinking exercise, work with your partner, share your ideas but... that's all. Sharing the idea, is that really critical thinking? Just expressing their opinion? It doesn't really mean critical thinking to me. (Interview 14).

There are loads of books which you're probably aware of that are intended to be textbooks for critical thinking courses. I've used bits from some of them, and I find that it just... the students find it boring. (Interview 16).

Perhaps resulting from this dissatisfaction, many teachers instead favoured using a thematic approach, and would source, or in some cases write articles that could be used to introduce topics in class. Rather than teaching critical thinking purely as a skill, they saw a combined approach of teaching skills through content as effective, to allow students to develop and reflect on or re-evaluate their beliefs, while they broadened their understanding of an issue. Several instructors considered controversial topics such as those involving social issues or ethical dilemmas to be effective and engaging, and reported students responding positively to these:

Another case study I use which again runs for a whole session is that, er, the students are faced with its a kind of moral, ethical dilemma that they're having to deal with a question about a medical treatment. Er, and I've got a lot good feedback from that because some of the students, you know from a biological, you know, those wanting to do medicine or something like that, they really get into that but the social science students also like that because they like anything that's highly contentious. (Interview 7).

I started to teach most of this stuff as either bio-ethics or digital ethics. The new technology of biology and genetics and cloning and stuff. Or the new technology of the internet creating ethical dilemmas. (Interview 9)

Topics that challenge them are better when it comes to critical thinking, because if you are dealing with controversial topics, you either think this or you think that, and that's a perfect starting point. Ok, you think that gays should marry? You're not sure? Ok, you two sit together and just work it out. Write down why you think so and go point by point. Last semester, I asked the boys to spend five minutes, while they were writing, to hold hands. And it was just ... half of them said, no, no, no, I'm not going to do that. I said, please, if you do that, I'll give you two percent. They all started holding hands and it was really funny to watch them kind of, hey, I did it. Some of them just got into it. Some of them you could see it was hard. And then, the girls did it. The girls had no problems doing it. I said, well, why is that? And that generated I think two more classes. Just that hand-holding exercise generated two more classes. Eight people out of 22 did their presentation on it, about how it made them feel, and why it changed how they felt. So, I thought it was really good. (Interview 10).

Another major category that emerged was the use of fiction as a vehicle to teach critical thinking. Several teachers commented on the advantages of using literary texts such as short stories as a prompt for critical thinking:

It draws on the student's reasonable acquaintance with the situation in life and because fiction, by its nature and which makes it better for critical thinking than non-fiction is the open-endedness. If you identify the thesis in an article you can test everything against that thesis, whereas in a short story, you know, it is up to the

student. The author makes no pretence of closing the circle. In a good academic article, you know where it should end and the author should take you to this place, so you are with him at the end going “I totally believe you”, right? In fiction, that place doesn’t exist. In that sense, the purpose of fiction is to basically get you to think about a topic in any way which would reveal something about it that you can interpret. (Interview 1).

At the same time, some teachers remarked that these same qualities that made fictional texts more challenging for students:

I think that understanding fiction draws really heavily on inference and implication, which requires cultural literacy and lot of background knowledge. (Interview 3)

As a result, fictional texts were often used in combination with non-fictional texts which shared the same theme, and could be used to provide a counterpoint or new perspective on a discussion topic. One strategy was to approach a topic with several texts from different disciplines, including literary texts, in order to broaden the student’s knowledge, provide alternative points of view, and study one topic area in greater depth:

What I started doing ... Oh, gee, it’s probably 15 years ago now. In an effort to get a little bit tighter thematic unity, in the second half of the semester, all of the readings pertain somehow to thinking about the environment. Different kinds of stuff. Maybe something by an economist, something by a scientist, a short-story, whatever.

(Interview 16)

Assessment strategies

Using critical thinking skills as the basis for assessment was an area which many teachers expressed uncertainty about. Both those teaching CT through content courses in EMI programs, and those teaching through academic English programs expressed a desire for the assessments they used to evaluate critical thinking, and not just reflect language use or knowledge acquisition. However, at the same time many expressed doubts about the best way for this to be achieved:

If we're going to incorporate critical thinking, it needs to be in the assessment task, and it is often not there. (Interview 4)

That's difficult. There's what I think they might be getting better at and there's what I can actually show through performance. (Interview 7).

I'm interested in assessment and obviously if the goal of the course is to teach students to be critical thinkers, then you'd want to test students on the content of the course, right? Criteria and reference testing. But then how do you get them ... How do you do that? How do you evaluate students on their critical thinking? (Interview 11).

Some teachers had experimented with using commercially available critical thinking tests, but found these to be logistically challenging or culturally inappropriate:

A lot of the tests that are supposed to measure critical thinking and are based on things that westerners would know more about. The Ennis-Weir test asks you to analyze a whole paragraph on something related to parking, you know, and traffic, and how many students here actually have a car, whereas a lot of students in the United States drive. This is something that immediately puts the students at a disadvantage. (Interview 6)

Tennessee Tech University, developed a CAT test; critical thinking assessment test, or something like that. It's quite expensive, but they train. I went to a training workshop for three days in the US ... And then assessment is really difficult for that test because it's all essay-based. It's not multiple choice. Students have to write in English answers to these questions. Having the students take it was difficult. It takes an hour for a native English speaker, so it took three for our students. And then assessing that took two days with like, 11 faculty working for seven hours or something like that. It was really too much. (Interview 15)

Because of these impracticalities, use of these tests had been rejected, and although some teachers expressed an interest in creating a critical thinking assessment tool more appropriate to their own students, none had yet done so. The most common method for teachers to assess the students in their classes was to use an essay, or to evaluate in class performance through presentations and discussions, often including an element of reflection in the task:

I would have some other assessments, one was a critical essay so that's where students would choose a topic, any topic and I would suggest it was either a topic they felt they knew something about or it was just a topic I could give them, something very controversial. And the idea was that they had to construct a persuasive essay, very different from a lot of the other work they do, to convince me of something. There is one person in the universe who will read that essay and that's me because I have to. And the idea there is that I'm assessing them on the basis of, you know, there's a whole bunch of things we've covered in the course by then like different rhetorical, discursive kinds of things, you know, do they present a sound argument, is there logical structure, is it well presented, you know, that kind of stuff.

(Interview 7)

My final essay is, I ask them to analyse themselves, and to compare their view before taking this class and now, I mean you know, at the time they completed this course. Every class I take, I ask them to write a reflection at the end. They write whatever they think. Just A4, one sheet of paper. Its handwritten and I just collect it after every class, and I keep it for them so they have got the hindsight of 10 or 12, up to 12 reflections of you know, past sessions. And I return it to them just before they start writing this essay, so that they can trace back their own change. (Interview 8)

I found the easiest way to get them to reflect on the discussions is to give them checklists and make them binary. Yes or no. Did this happen, yes or no? Those kinds of things. And then students can make note of that, for their partner or for themselves. And those things, I think, help raise awareness of their performance, together with the

kind of feedback they get back from me. If it is binary, there's nowhere to hide, right? And if you use exactly the same terms that you use in class when you're teaching, they can say to each other okay, you didn't support your opinion, you used one example, you didn't ask any questions. That's quite meaningful to them, I think. (Interview 11)

8.4 Theme 4: Student motivation toward critical thinking courses

In discussing what motivates students during their critical thinking courses, the instructors mainly answered based on their own speculative impressions, though in some cases they referred to feedback they had received directly from students on course evaluations. For some instructors, the majority of their students were taking the courses as a requirement, while for others, their course was being offered as an elective, making motivation a difficult area to compare. Nevertheless, three main categories that emerged in relation to motivation were, 1) being motivated to improve English skills, 2) being motivated to improve thinking skills, and 3) being motivated by course content/ topics. Of these, improving English was most frequently identified by instructors as the primary motivating factor for students:

Unfortunately, for most of the Japanese students, the um, improving English, improving their English is their aim. Yeah. They're not thinking about critical thinking itself. (Interview 8).

From student evaluations, I've seen over the last few years, the kinds of things they say is that, you know, they wanted to, some will say that they wanted to improve their English, others will say they wanted to, get better at writing essays, and a few might mention critical thinking. (Interview 7).

While some instructors expressed frustration that most students signing up for the course were not intrinsically motivated to improve their thinking skills, others were less concerned about this, and saw opportunities for improving English as a factor that would keep students motivated, whereas critical thinking might be something less tangible for students:

This course, helps bring out some of these words that are buried, because they have to be more complicated in their writing, and they have to speak with more complexity. In that sense, the course actually is very good at making the students go beyond everyday conversation and makes them dig up the words that they haven't used, but they know and never tried. On the course evaluation, we talk about critical thinking a lot and answers are always a mixed bag. But there is a question that simply says did you think you improved your English, and every student says yes, despite the fact that there is not one linguistic element built into the course. (Interview 1).

However, others felt that their critical thinking courses were being marketed within the universities as English courses, and as a result, students came expecting an English class. Finding out that the course goals are not related to language, and language learning only

takes place in an incidental way could then have a detrimental impact on student motivation:

It's not an English class. No, I am not going to correct the grammar mistakes. Yes, I will teach them keywords to help them express their ideas, but that conflict between what they think they are going to be getting in the classroom and what they do get, can undermine what we are trying to achieve. (Interview 5).

In discussing de-motivational factors further, some teachers questioned the validity of teaching new thinking skills in English, and felt that expecting students to cope with both a cognitive and linguistic challenge, at the same time coping with an intensive workload was unfair, and some suggested that struggling students could benefit from receiving first language support to cope with rigours of the course. These issues of demotivation are raised again and explored in more detail under the scope of the next theme.

8.5 Theme 5: Outcomes, obstacles, and enabling factors

The fifth thematic area accounted for the largest number of codes (184), and is concerned with the outcomes of CT courses. Under this theme, codes were divided between three categories; 1) ways in which students benefit from taking a CT course; 2) Obstacles that are perceived to impede on the development of student's critical thinking skills, and 3) factors that have a positive effect. Through discussing the impact of their courses and ways

in which this impact might be limited, some instructors also suggested some of their own ideas for strategies by which the courses could be more effectively administered.

Benefits of critical thinking courses

The developments that instructors described in their students were in relation to critical thinking, academic skills, and language acquisition.

Development of critical thinking skills and disposition

Instructors described the ways in which students improved critical thinking skills during their courses, but in most cases these views were provided in a speculative manner, and were mostly based upon interviewee's subjective impressions. Nevertheless, several points of improvement specifically related to critical thinking skills were identified. Some teachers categorized student improvement into two areas: receptive and productive skills:

I like to think they are not just getting reading skills, because the course is so bent again on production rather than just critical reading. (Interview 1).

Well, I guess perhaps in two things. One would be in the reading area, which is particularly when we give them fiction, getting the inferences and the implications. They practice that and with a little bit of guidance and help with what they could or should be looking for, they get better. And then on the productive side, the discussion

side and responding to each other in a way going beyond merely agreeing or disagreeing. Referencing each other in the conversation, responding to what those other ideas are. (Interview 3).

Other interviewees also particularly emphasised the development of critical thinking as a productive skill, and suggested that students are not merely developing skills, but also a critical disposition, and based on observations about their behaviour, claim that students are becoming more intellectually autonomous:

If I just get really subjective here, I've got a feeling that they, the students are better, they get a better sense that perhaps what they're doing, not all the time but what they can be doing in university courses is to be taking a more er, to go from being more passive to being a bit more proactive, to be willing to challenge things, to be willing to say "I don't agree with this" or "I think we need to get more information" or "I don't understand this". For example, "I don't understand this, and it's not because I'm stupid it's because this is very poorly constructed and missing things". So, it gives them a sense of that intellectual autonomy. (Interview 7).

Hopefully, in the long-term, they would be more willing to reflect on conventional thinking, which almost everyone participates in, so reflecting on your own ideas as well. That's... I like to think so, that a student who has gone through this course might be a little less likely to buy into some sort of crazy ideology. (Interview 16).

As the interviewees themselves remark, these views are highly subjective, and in relation to critical thinking, it was difficult for them to pinpoint measurable points of improvement. However, as another way that development of critical faculties was evidenced in the interviews, some teachers offered anecdotes of incidents from their classes, showing how some student behaviour had changed through participating in the courses:

I had a girl in one of my classes. I was talking about something and she kept asking questions. And the rest of the class were getting really bored with her as she said: "Oh, but that means that". That year, it was about gender. "So that means that women are shit in the eyes of the world". And I was like, kind of, and she started crying like it just hit her how hard her life as a woman was going to be. She kept questioning the concept until she realized that the reason she couldn't understand it was because the way she'd been coming at it her whole life, like: "women are kind and sweet. Life is going to be fun", just could have been wrong. And she just broke down and cried. And I said, okay, come and see me afterwards. And when she came to see me, you could tell that she wasn't going to be an office lady anymore. That was not her path. And the other students were like, oh, why don't you stop asking questions? We want to take a break. But she just ... I've never had that kind of ... It was like an epiphany for her. (Interview 10).

I did something a week ago in one of my classes and it wasn't necessarily about critical thinking. It was a collaborative task that involved some design, some planning, some creative stuff. We finished, and some of the people in the class were

like: “what was critical thinking about this”? Oh, wow, now you’re thinking. And then we talked about what kinds of elements of critical thinking were involved. So I think they get better. I was so happy when they asked that question. It’s just about asking questions. (Interview 14)

Development of academic and linguistic competencies

Apart from critical thinking skills, other interviewees identified improved academic and research skills as outcomes of their course:

Based on the student evaluations, what kinds of things do the students say? Invariably they say, things like, they felt it helped them particularly with things like study skills. So how to, how to do some basic research quickly. How to construct a kind of template for an essay or a project, so putting something together really quickly. And I, I’m pretty sure the students are picking up those skills. (Interview 7)

Other teachers commented more generally about improvements to student’s English skills. Reading was one area where interviewees identified increased confidence:

We teach them to critically analyze and article, and through the course they got much better at that. (Interview 5).

They learn how to tackle difficult texts. That's another important part of the course. We don't use articles from newspapers or that kind of thing. It's pretty demanding stuff. Ideally, you find a text that is just beyond most student's abilities and then try to give them help somehow, as Wayne Booth put it, getting the meaning from the page. (Interview 16)

Writing skills were another area in which teachers highlighted the way that the course helped students to develop familiarity and confidence with the writing process:

They see their writing skills improving. If nothing else, given the heavy writing load, they find out they can do it. So once one of our students has made it through the course, that student is never going to be intimidated by an assignment in another course. They know they can get the words down on paper. (Interview 16)

However, the area that is a recurring theme, that the teacher's comments identify most frequently, whether viewed as an area of linguistic or cognitive development, is an improvement in discussion skills:

Thinking about discussion, maybe the students haven't been given the opportunity to discuss. Maybe the students don't know what it means to discuss. So, if you look at how they perform in the first week, then there are certain behaviours that seem to be common for all students. For instance, not challenging each other, not disagreeing. In terms of turn taking: A asks B, B asks C, C asks D. They start a new topic, A asks B, B asks C, C asks D. And they're not engaged with each other's ideas. They're so nervous

as language speakers, they're not actually exploring a topic together in any meaningful way. There's no evaluation or synthesis. But by the end, through the use of the skills, they're having -I don't like to use the word- but deeper discussions, where they do challenge each other. They might put counter-arguments to each other or they'll support their ideas in more depth. They'll develop on other people's ideas, maybe come back to a point that they'd already spoken about. Rather than just let it go when they disagree, they might actually pick the speaker up on it. So yes, I think you can see ways in which it improves. (Interview 11).

Obstacles to course effectiveness

Despite these positive outcomes, there were several aspects of teaching critical thinking that teachers expressed frustration about, and viewed as a barrier to the effectiveness of the courses they were teaching. These could be categorized into three areas: 1) the difficulty of teaching critical thinking to second language students, 2) classroom behaviour that impedes critical thought, and 3) structural, institutional limitations related to course organization.

Teaching critical thinking to L2 learners

Many teachers commented on the difficulty of teaching CT in English to students for whom it was their second language. In classrooms where English is used as the medium of instruction, the course content is delivered in English, often with little language support. Depending on the program, the ability of students to cope with this varied. Some programs

had many international or returnee students, whereas others had a larger proportion of Japanese students who had only been educated in Japan. Some courses were taught in small tutorials, while others were taught to larger groups. In some programs, students are put into classes according to English level, whereas in others, Japanese students with intermediate English skills might study alongside international students for whom English was a first language. Even those teachers who had a background in language teaching commented on the dual challenge of helping students to learn new skills in a second language:

In my experience, it's always been in an EFL context, so there are two levels. There's not only the critical thinking itself, there's being able to do or to display or perform in English what they might be able to do well in Japanese, and that can be difficult to tease out. Sometimes it's that a student doesn't quite get the idea how to critically analyze or think about something, but sometimes it's simply just a language issue. (Interview 3)

They have two levels to operate at, it's not just to be able to think. They have to be able to express clearly and have understood the ideas to think critically about them. So, for me it's always at the deep level, "why are we teaching it in English?" and for a lot of students this is new. We are introducing relatively new concepts to them in their second language, which I think would be much more natural for them to get in their first language and then be able to build on in their second language. (Interview 5).

When you start dealing in a second language, you also have the processing limitations to deal with, as well. Critical thinking uses processing capacity, so there's a conflict there. Learning to do it in English needs to be more controlled, perhaps.

(Interview 12)

In some cases, teachers suggested ways in which support in their first language might help struggling students to understand course content and cope with the workload:

There's no English help for the students, as in English language help. None at all. It's assumed that you've chosen this university because of its program, and you should know about this program. From the very first day you come in, everything is in English ... If it was up to me, I might have them duplicate what I teach them in Japanese. We would have one lesson a week where we have a lecture in Japanese on this topic. That might help those who feel a little bit left behind. Because the course is pretty intensive. It's pretty full-on. (Interview 10).

Another way in which students could receive language support was through employing a teaching assistant- common as a practice in national universities, but not in the private university sector. The major benefit of this is being able to provide language support to individual students in the moment, and to focus language support to those students who need it. However, even in this case, there is the lingering implication that some students needed more effective language support to benefit more from the course:

To get around, you know the basic kind of issues with, you know if students are really struggling with a lot things, I have a teaching assistant for the course and the teaching assistants, you know I always try to get someone bilingual so, I encourage the students and the teaching assistants to work together. And we've also had feedback that, from students taking these kinds of courses, they do want more language support, so clearly that is an issue. (Interview 7).

Deference to the teacher

A second challenge that many teachers picked up on was overcoming a culture of deference to the teacher. Many of the interviewees saw it as important in a critical thinking context that students should not accept unequivocally the words of their teacher, and sought to create a classroom culture in which students could easily question and challenge them. However, in practice, many found it was difficult to overcome the expectation, particularly from Japanese students, that their teacher would provide them with 'correct' answers:

There still seems to be this deference to the teacher. They will attack, they will analyze and be critical of the article, but not of what the teacher says about it: that seems to be still accepted as the truth, which for me is what they should be trying to get away from with critical thinking. (Interview 2).

In many cases, teachers attempted to overcome this through aspects of their teaching performance; playing roles in order to get a reaction from students. However,

while students may be able to challenge teachers when they are play acting, this does not necessarily translate into students becoming more disposed to challenge the teacher at other times:

If I play devil's advocate very blatantly, then they will tend to pick up on it, but usually it's more that if the teacher says something, they assume the teacher knows the right answer. And my point will be there isn't a right answer: there are lots of possible right answers, and I think they still struggle with that concept.

(Interview 5).

I'm presenting them with all sorts of stuff and constantly saying: "don't believe, don't just accept everything, and that goes for everything that I'm telling you". They struggle with that. Often, I give ridiculous performances. I make outlandish statements, sometimes I act more like a you know, kind of a stereotypical professor and give these sophisticated kind of things, but I'm deliberately doing it, you know, to try and get them to stop me and say, you know, "with respect professor", (laughs) "there's a problem with what you've just said" and then I can use that as a teaching instance. (Interview 7).

Structural, institutional constraints

Viewed more generally, this could also be seen as indicative of the limited impact on the development of a critical disposition that instructors perceived. While improvements in specific thinking skills have been noted, teachers expressed doubt that their students would

be able to then apply these skills outside of their own courses. In many cases, they felt that the institutional constraints within which their courses operated were the cause of this limited potential:

Whatever I conceive CT to be about, or how it should be taught or indeed it could be taught, all of that takes place within a clear institutional framework and we end up trying to do this in, in kind of quite limited ways. So, for example the course I teach is one 90-minute session a week for 15 weeks. And so that straight away puts a lot of constraints on what I can effectively do. (Interview 7).

I don't think it's possible to teach critical thinking in a semester or in a year, because I'm a grown man and I still don't think critically all the time. I don't think anyone can actually teach young people to think critically within the time constraints we have. (Interview 9)

Teachers were also critical of a lack of integration and interaction between the different courses and instructors who teach within a program:

Either the university or my department says something about critical thinking somewhere on the website but nobody else teaches critical thinking. Nobody knows what they are doing and nobody cares what other teachers are doing including language teachers and non-language teachers, and also content teachers, department wide. The top people don't know what we are doing, and it seems like

they don't really care. I feel like I'm the only one really doing the critical thinking.

(Interview 14).

Greater unity of purpose across the curriculum, with course integration to promote CT was proposed by some instructors, though it is questionable whether these ideas could be actualized in many institutions:

You would need to have control of the curriculum and not just be teaching your own private classes. Like if you teach in an establishment that doesn't have a unified curriculum, it's really tough because nothing gets supported. So even if the name of the class is discussion, there's no guarantee as to how each teacher interprets that. So, if you wanted to deal with critical thinking in a more detailed way, it would be great to have a multi-skills focus. You could have them read in depth and analyse articles in a reading course then you'd have them maybe discuss the same topics in the speaking course and then you'd have them maybe produce some essays in the writing course. All those three things would feed into each other. That each course should give students a chance to recycle what they've learned in another course seems like an obvious educational benefit but a lot of places are not set up for that. It's very difficult to actually make something like that happen. (interview 11).

If you were starting your university program from scratch, I can see a perfectly reasonable argument saying, well this will be the kind of class that's every week day. They're going to come in and do this every day which will help. When I started college as a freshman, the only class that everyone was required to take in their first

semester was a tutorial, and it was a well-intentioned idea that didn't work, because it was a class taught by an upperclassman and in reality, we just ate breakfast and talked, but that kind of idea taken a little bit more seriously was probably a good idea. From an academic point of view, it could be useful if it had been little bit more structured or a little bit more demanding. (Interview 3).

Enablers of critical thinking

Two factors that teachers identified as effective for creating a class atmosphere conducive to critical thinking were group learning and diversity in the student body.

Group learning

As discussion is often the primary class activity, group work is for many of the teachers a cornerstone of the way they approach the classes, which they felt facilitated the potential for critical thinking to develop to greatest effect. In one case, the program coordinator described their decision to keep student numbers to a minimum in the course, so that students could learn critical thinking in the environment of a tutorial:

Obviously smaller groups are better for that, right, and the teacher is able to spend more time with each student if the class is small. So that's why we decided on ten maximum, but actually it is usually never ten it's more often just six. (Interview 1).

Teachers who had worked in this program were very positive about the effect on students in comparison with other kinds of classes that they had taught:

In that case, the fortunate thing was that all these classes were relatively small – maybe less than 10 students, and they were electives- students who kind of want to be there. So a lot of things that I was able to do, might not be applicable in a larger course or a mandatory course. If you’ve got 40 students and it’s one of those classes where every first year has to take critical thinking, then stepping back and letting them talk while you’re just sitting there is not going to work, right. (Interview 3)

However, even those teachers who taught larger classes had considered ways in which they could develop effective strategies to implement group work effectively:

I divide them into small, smaller groups of um...yeah, this semester...the group size is like you know seven or eight people in each group. Er, ideally having you know Japanese and international students together. (Interview 8).

Teaching Enhanced Active Learning- TEAL. Those guys at MIT and Cornell and a bunch of those schools played around with using these small groups, and they found basically, two facts. One is the group should be between six and eight students. And the second is that the arrangement of the group is really important. It should be in a circle, so the discussions in the group have a physical orientation of equality. And so that is basically how I try to arrange the students in my classes. (Interview 9).

Group work enables the teacher to run a class efficiently, and allows them to take on the role of facilitator, but also has specific benefits for critical thinking. In particular, the comments from teachers identify chances for perspective taking and self-reflection being positively affected by group work:

Critical thinking is best done as a group. Other students will give you a slightly different perspective, and that helps you broaden your kind of an approach. You tend to see a problem through your educational training, through your, you know, very personal experience, right? And nothing's wrong with that, but the fact of the matter is it is limited. You cannot see the whole. Or you need to step back from the wall so you can see the entire wall. (Interview 1).

My class is broken down into small group discussions and entire class discussions where all 30 of the students would be participating in some form and that would be one group of six to eight presents their analysis of an issue, and other groups are listening. And they have tackled the same problem. And they then go and distil or revise their whiteboard while the first group is presenting. And so that's a process where ... I don't know if you'd call it brainstorming, but it's a stimulation response process. (Interview 9).

The students can make each other aware of blind spots and different perspectives. So ideally, that's how it works, and basically, I'll monitor the discussions at a distance. (Interview 16).

Diversity

Another aspect of their courses which the instructors found beneficial to promote critical thinking, was the diversity that might exist within a group of students. Diversity was discussed in the interviews in reference to cultural diversity, but also in terms of the a diversity of students from different academic backgrounds, and also in one case with reference to gender:

Ideally, I'd like a mix of male and female from different backgrounds all of exactly the same language ability, but of course you rarely get that. (Interview 13).

In each of these cases, the view was generally expressed that the more heterogeneous the body of students, the more dynamic their group work would be, again resulting in more opportunities for perspective taking and self-reflection. In an elective EMI course at one university, which drew students from a number of different academic disciplines, the breadth of knowledge, experiences, and skills within a group allowed them to contribute different views to a discussion:

They bring totally different knowledge bases with them. So, I have students from the science department, talking to students from, say economics. They all come up with different ideas and that's really good. If they come from different backgrounds with different areas of knowledge, in theory that should relate to different perspectives and more for everyone to think about. (Interview 2)

For some teaching within EMI degree programs, cultural diversity was a major talking point. Many of these programs need courses in which an international student body can be integrated with the Japanese student body, and a critical thinking course could become a vehicle to provide opportunities for intercultural learning:

Basically, you know, that Japanese students and international students are together is a request from the University and those students. I've been in [this university] for almost one year now. But before that I was in [another EMI program], and there the request was the same. The University wants to promote more learning with international students and Japanese students together, and whatever we can teach, it's very important that they learn something where they share the experience together. (Interview 8).

In other EMI programs, the student body may not include a large body of international students, but even in these cases there could be a diversity of 'international' identities within the body of Japanese students that tend to be drawn to the program:

By passport, the vast majority of our students today are Japanese, but many of them fit into different categories. Either they were educated in international schools in Tokyo, or have spent a lot of time abroad, or are so-called 'haafu'. (Interview 16)

Often these students identify as being bi-cultural, right? So, they don't, you know, if you ask them like, you know, do you identify with being Japanese they will say "well yeah sometimes I do, sometimes I don't", right? (Interview 7).

Teachers spoke enthusiastically about the mix of different cultures that could be found in their classes, and the way that this brought different perspectives to the issues under discussion in class:

At the moment, I've got students from Hong Kong, a student from Mainland China and then some Japanese students, and we would be discussing censorship. And that's really interesting because the Hong Kong students are full of very interesting ideas and gradually the Mainland Chinese student is coming out with things, and then the Japanese students totally bring in new perspectives and for me it's like, "wow, I have not considered that, in my perception of what is going on in Mainland China". It isn't the same as how she perceives it. So that for me is great, as a teacher. (Interview 3)

To me, this is a critical piece to the puzzle. And so, I'm very lucky. I have students from all over the world. I have a couple of Iranians, a Jordanian, we've had French students, in my class at [another university] we've got a Bangladeshi, we've...let's see, a woman from Poland um, often times Koreans, Australians, New Zealanders and of course Americans. But that mixture is critical to my way of teaching which is the experiential way. Without those international students, it won't work as well, because there's no modelling of speaking your mind, and the brainstorming sessions are much quieter. And, so, when I've done this with an all Japanese class its difficult. (Interview 9)

Furthermore, the interviewees viewed the presence of international students in class as something that motivated Japanese students to participate in discussions:

Whether they're native speakers or not, you know, their English level is very good, and Japanese students are just, you know, encouraged to speak more. (Interview 8)

You mix them together with foreign students, who speak their mind. They step up. (Interview 9).

8.6 Theme 6: The role of critical thinking in Japanese society

In relation to the final theme that emerged from the interview data, interviewees expressed their views on questions related to the interaction between critical thinking education and Japanese society. There were three major areas of interest under this theme: 1) misunderstanding of the concept of CT in Japan, 2) The lack of critical thinking in Japanese education, and 3) the value of CT in Japanese society.

A misunderstood concept

Several teachers described critical thinking as a misunderstood concept within Japanese universities. Misunderstanding could stem from the negative connotation associated with the Japanese translation of critical thinking as 批判的思考 (*hihantekishikou*), as one of the Japanese interviewees explained:

For Japanese, the translation of critical thinking is 'hihantekishikou' and the word 'hihan' means, like criticism. So, people may have a negative impression of critical thinking. I think that might cause a little bit of problem and misunderstanding (Interview 15).

This negative connotation was described as a reason why some Japanese university administrators misunderstood and rejected CT as a western construct based on a form of cold logic:

I went to attend a meeting with a very prominent professor, and he rejected critical thinking out of hand as an alien, western, you know, kind of a construct that we are trying to force on poor Japanese students. I say that because that's what he really was trying to express. And I remember this very clearly because he just, he misunderstood as far as I am concerned the whole notion of critical thinking. Alright he completely misunderstood it. He emphasized that it is just all about, you know, making logical arguments, and being critical. Criticism. So, the way he looked at it, he described it as a very negative experience. (Interview 1)

This interviewee and others sought to challenge the notion that critical thinking was incompatible with Japanese thought, and emphasised ways in which characteristics that are associated with Japanese behaviour, conversely display a disposition towards critical thinking:

He posited that it is not Japanese, because Japanese people try to find ways to accommodate, to understand other people to which I replied: exactly right. That's exactly what critical thinking teaches you to do, why would you think it doesn't do that? If you cannot do that, you cannot be a critical thinker. (Interview 1).

The Japanese tend not to do it openly, publicly. They might do it in private. And I think this course assumes that they can't think critically. And maybe they can, but they just do it differently to us. Maybe they're doing it in a different way, and it works for them here in Japan. Whereas the way we teach it is not going to work here. (Interview 10).

Others saw a misunderstanding of critical thinking, coming not only from those administrators who rejected it, but from those who sought to promote it, but who did so in a superficial way that fails to comprehend the level of commitment needed to promote critical thinking education effectively:

Critical thinking to me is a buzzword, like globalization, and it goes hand in hand. In a lot of ways when people talk about internationalizing programs or integrating critical thinking into their programs they are just talking about using English. (Interview 4).

I often feel that I'm teaching this course and its all, "Critical thinking skills, yes we offer it. Right we can tick that box, move on". It's like, yeah ok, we're doing this kind of, world's best practice in our undergraduate education. We offer a course in critical thinking skills, but I've got to say that's just a bit of a joke really, because, you know I

would need to do this for more than 90 minutes, once a week, for one semester if you really took it seriously. (Interview 7).

Absence of critical thinking in Japanese Education

Complimenting these sentiments expressed by some instructors that the effectiveness of critical thinking courses was limited by the logistical constraints required to fit within a rigid curriculum, specifically in terms of the amount of time allocated to it, others point out that this situation is exacerbated by the contrast between the pedagogy students experience in EMI critical thinking courses, and a Japanese student's typical prior educational experiences:

I did get the impression, and in some cases, they explicitly said a lot of what they are being asked to do in this class is stuff they had never really done before. (Interview 2)

Some of them, if they're Japanese students, never done anything like this before, perhaps not done a lot of English medium courses, they're really, really like, I can see it they're like "oh". They're in for the ride. It's like a rollercoaster for them.

(Interview 7)

In part, this 'shock' can be attributed to the fact that learning is taking place in English, and also, as noted under the discussion of themes three and five, many instructors approach critical thinking courses with the explicit aim of giving students an experience that challenges their expectations, "de-centres" their thinking, or attempts to "normalize"

alternative modes of communication. Nevertheless, some teachers felt that Japanese students were at a disadvantage in this environment, because their previous educational experiences were lacking in many aspects of critical thinking. This experience gap becomes exposed when studying alongside international students in EMI courses, whose educational background may have better prepared them:

I wrote [on mind-map] "should start in high school". I mean if they are really serious about developing critical thinkers, I mean you'd better start like, way before university. (Interview 6)

Especially, the Japanese students, they hardly know about critical thinking, according to my impression. The westerners do. It's something that they know already, they understand it, whereas we really don't know. (Interview 8)

The Japanese students are still like, "I am student and I am going to make sure that I understand you, the teacher. I will try it, and I will take a baby step", but the Chinese students especially, they know what to do. If you are not careful they will dominate the class. They are trained to be smooth and well-spoken. Its encouraged in their education system and their culture to propose what they are thinking. They are allowed to speculate out loud, where, as you know in Japan that is less encouraged. You kind of, don't talk shit until you really know what you are talking about and I know that is a little bit of a generalization as well but I think there is some merit in it. (Interview 1).

The issue clearly is related to the culture of deference to the teacher, that had been identified as an obstacle to critical thinking under theme five. Both of the Japanese instructors among the interviewees offered insights into how Japanese education discourages students from asking questions or making independent decisions, based on their own experience, which they suspect is much the same as the experience of the students they now teach:

I just didn't really have an opportunity to choose things when I was younger. From elementary school to high school, we were just told what to do. In elementary school, we lined up in the morning. We walk as a group in line and that's not my choice. That wasn't my choice. We had to do things. We do our lunch and cleaning by ourselves and we didn't have any choice. We have a turn to do those things. So, I was so used to those kinds of things that I didn't really have to think about anything. (Interview 15).

There is sort of, a social requirement not to become critical. We get in education that you know, we have to imitate what the teachers do and we don't ask questions and, you know, we have to keep learning and memorization is the most important thing and I don't think that this tendency has changed, even in this international environment. (Interview 8)

Even in other university courses, there often seems to be emphasis placed on lower order thinking skills such as comprehension, which is in stark contrast to the experience of some of the interviewees from other countries:

I had one student at a previous, high-level university who was a literature student and I was also a literature student. But just looking at what they did in courses, compared to what I had experienced studying literature in the UK, it was just translation. Every week the homework was to translate and then every class was okay, you translate first, then you second, you third and you fourth. Whereas, you know, one of the things I hope that I got from my education was the ability to think rationally and discuss rationally. (Interview 11)

Furthermore, in considering the extrinsic motivations of students, the intangibility of critical thinking as an educational objective, when weighed against other aspects of their education that seem more directly relevant to their future aims, some students and even instructors, might feel that time spent developing critical thinking skills is of limited relevance and value:

There's so much of this teaching towards the exam stuff. Even if they don't admit it, people are still doing it, because they don't wanna let down the students when they have to take these exams, and they don't want the students to think that they are not doing their job, I guess. There is a sense that students will feel let down by the professor who says, "but if we're using this in a global context, if we're thinking of the actual practical application of what you are doing in this course". Students don't wanna hear that. They wanna hear "how does this help me pass the exam?", "How does this help me get a job?" Period. (Interview 4).

The usefulness of critical thinking in Japanese society

Building on this suggestion that critical thinking courses may not be useful to students in the job market, several of the interviewees questioned whether critical thinking was actually a skill valued in Japanese society, despite the hyperbole that surrounds it:

Is it necessary? There is a lot of emphasis on it now, but I mean when you think of Japanese society is this really a skill that they are looking for, that Japanese companies are looking for? For people who fit to their system? So, I mean there is a lot of emphasis on it in the university, but whether it is really made for the student's needs? Is it really something that should be required? I think that is still kind of up in the air, in terms of Japanese society and what fits in with their business environment. (Interview 6).

Others thought that becoming more critical may be a hindrance in Japanese society, as to question or challenge conventions openly may contradict the importance placed on relationships and harmony. Not only is critical thinking not necessarily something valued in the business world, but to behave as a critical thinker, in the way that students are often encouraged to do in EMI courses, could lead to their becoming ostracised:

The Japanese are just not that confrontational. It's seen as more rude here. And of course, I'm not saying everyone, I don't want to make too big of a generalisation, but as we both know as teachers, it's really hard to get students to be critical of what's going on in class, because it seems rude to them. (Interview 17).

In Japan, I think the culture goes completely against the idea of thinking critically. It's a culture that values relationships and values harmony. And so, I'm starting on the back foot by saying, okay, culturally, everything you've learned today, throw it out the window. Because I'm now going to tell you to question your elders, question your parents, question your professors, question everything. One of the things that I say to them is that, this is going to be alienating. If you really did this, if you went home and your mother said you need to go to bed at 10 o'clock and you said, but why? Or you started questioning everything in your part-time job, it's going to be alienating.

(Interview 10)

In this kind of social environment, what's the meaning of being critical really? I really don't know the answer for this, you know, because as you become more critical in this kind of society, people avoid discussions. Not discussions but arguments, you know. If you learn to become more critical it could make your life stressful or more difficult. So that's a kind of contradiction that I'm feeling. (Interview 8).

Thus in some cases, while students might be asked to display their prowess to ask pertinent questions, to seek the evidence that supports claims, and to examine their own cultural biases within the context of an EMI classroom, many of those interviewed expressed reservations about the extent to which it could be beneficial to them outside of that environment, conversely suggesting it may even be detrimental. Paradoxically then, it could in fact be interpreted as undiscerning or *uncritical* for students to take the critical thinking skills they learn in the EMI classroom out, into Japanese society.

8.7 Commentary

Six themes have so far been discussed in turn, the words of interviewees foregrounded to give them voice. In this commentary, the major findings are first reviewed briefly, and are then compared with mind-maps that interviewees had created before interviews commenced. Finally, there is a discussion of how critical thinking and intercultural learning intersect throughout the six themes, and a model is proposed which shows that the three philosophies which have been found to contest the concept of critical thinking in Japanese higher education, can actually compliment and support each other in classroom practice.

Review of findings

In considering the nurture of their own critical thinking skills, the interviewees most frequently identified higher education as having been a formative experience, instrumental in shaping their own critical dispositions. In their personal definitions of critical thinking, they emphasised the formation of a question habit and the ability to evaluate evidence used to support claims, while also noting the significance of reflexivity, creativity, logic and perspective taking. In their teaching approaches, many viewed their own role in class as that of a facilitator or coach, rather than teacher or lecturer. They emphasised critical thinking as an everyday skill that can be acquired and improved as long as students are given practical opportunities to apply it, and are taught analytical thinking processes in a structured, scaffolded way. They tended to favour thematically linked applied practice, using social

issues and ethical dilemmas as topics approached through a selection of texts from different disciplines, highlighting the potential of fiction to provide a counterpoint to the logic of discursive texts. While expressing a degree of uncertainty about practical ways in which CT could be assessed, they favoured the use of written essays and reflection tasks, while also basing assessment on presentations and discussions.

Despite the fact that it was not the objective of their classes, more often than not instructors considered the students they taught to be primarily motivated to improve their English through EMI critical thinking courses, rather than intrinsically motivated to learn critical thinking skills or gain academic competencies. However, they subjectively took the view that their courses were effective in fostering critical thinking skills, which students are able to improve both receptively and productively. They considered group work, and a diversity of academic backgrounds and nationalities within their student groups to be catalysts for critical discussion, particularly in terms of promoting perspective taking and reflexivity. However, they identified several obstacles to the effectiveness of their courses: the cognitive challenge faced by second language learners of using higher order thinking skills and processing information in another language simultaneously; the difficulty of overcoming a culture of deference to the teacher within the classroom, and the limited potential of their courses to fully realize their objectives, within the time allocated by rigid university curricula. Furthermore, they considered these difficulties to be exacerbated when teaching Japanese students, because of the absence of any critical thinking focus from their prior educational experiences. Some described CT as widely misunderstood within their institutions, and despite the fact that it is talked about as a vital 21st century skill, wondered whether a critical disposition might actually become a hindrance in Japanese society.

Comparison of findings and interviewee mind-maps

As mentioned in the description of the interview procedure in chapter four, at the start of each interview, participants were asked to spend a few minutes drawing a mind-map on the theme of 'teaching critical thinking at universities in Japan'. Initially, this was conceived simply as a way to allow interviewees to take the lead from the start of each interview, as they could begin by explaining what they had written. Mind-maps however, as visual representations of each interviewee's conception, drawn spontaneously and freely (rather than framed by the questions of an interviewee) can be insightful data sources in their own right. Although it was only possible to receive mind-maps from twelve of the seventeen interviewees, here they are used to corroborate whether the findings as they are described are an accurate representation of the interviewees views: to check whether the themes that are highlighted in the analysis are also given prominence by the participants in their mind-maps. Photographs of the twelve mind-maps are included in appendix eight.

While legibility may be an issue in some cases, the major findings of the thematic analysis are well represented in the mind-maps. The word 'questions' is placed at the centre of the first interviewee's mind-map and underlined three times, showing its centrality to this teacher's definition. 'Discussion' is at the heart of interviewee three's map, connected with 'evaluation/ analysis' in a cyclical arrangement, with 'advice- e.g. from teacher' written on the periphery, highlighting the view of instructor as a facilitator. Interviewee seven wraps 'institutional constraints' around a diagram of the skills they seek to develop in their

students, drawing attention to the limited impact a course can have. Table 8.1 below shows a selection of comments taken from the mind-maps and the themes to which they relate from the interview analysis.

Table 8.1 Selected mind-map comments and related interview themes.

Mind-map	Comment	Related interview theme
Interview 1	• Questions	Theme 2- definitions
	• Overcome bias !!	Theme 2- definitions
	• Learn as a group	Theme 5- enablers
Interview 2	• English subject?	Theme 5- obstacles
	• Fewer chances to engage in critical thinking	Theme 5- obstacles
Interview 3	• Discussion, evaluation / analysis, output - advice.	Theme 3- approach
Interview 4	• English- student aims	Theme 4- motivation
	• Different backgrounds - Chinese, Japanese	Theme 5- enablers
	• Defer the teacher - listen to me too much	Theme 5- obstacles
Interview 6	• Is it necessary?	Theme 6- society
	• Should start in H.S.	Theme 6- society
	• Culture - lack of varied opinions	Theme 5- enablers
	• Debate in families/ friends	Theme 1- development
Interview 7	• Institutional constraints	Theme 5- obstacles
	• Evidence, logic/ reasoning, rhetoric	Theme 2- definitions
Interview 10	• Ask questions- question everything	Theme 2- definitions
	• Culture- 2 nd language	Theme 5- obstacles
Interview 11	• Cultural bias?	Theme 2- definitions
	• Individual – pair – group	Theme 5- enablers
Interview 12	• Necessary 21 st century skill – life / work	Theme 3- approach
	• Difficult to define	Theme 2- definitions
	• Teaching through English	Theme 5- obstacles
	• Not systematically taught at high school	Theme 6- society
Interview 14	• Students have no previous experience	Theme 6- society
	• Important life skill	Theme 3- approach
	• Are students going to actually use in their work?	Theme 6- society
Interview 15	• Content classes / English classes?	Theme 5- obstacles
	• No critical thinking really although it says “critical thinking” in the textbook/ syllabus	Theme 3- content / materials
	• Different perception of CT by teachers and Students.	Theme 5- obstacles
	• Difficult to teach, even in student’s L1 (Japanese)	Theme 5- obstacles
Interview 17	• Culture- politeness / appropriation / common sense	Theme 6- society
	• Critique – Assumptions / perspectives	Theme 2 definition

As the table makes clear, all six of the themes that were identified in the thematic analysis can be said to be present in the mind-maps, which mirror the concerns expressed in interviews, and triangulate the analysis in a useful way, by showing that the themes were considered to be of importance to the interviewees before the interviews commenced.

Critical thinking and intercultural communication

Not quite pronounced enough to be viewed as its own theme, yet at the same time threaded through all six of the themes in the analysis, bubbling under their surface, a narrative of the interconnectedness of critical thinking and inter-cultural communication can be found. Exposure to other cultures was cited as a key factor by several instructors in shaping their own critical dispositions; through travel, overseas study and intercultural communication courses studied at university. While they most often associated CT with a questioning habit, other traits related to intercultural communication such as perspective taking, overcoming bias, and flexibility also make up a significant portion of the definitions of CT constructed in the interviews. Materials selected for use in class are chosen to broaden student's exposure to world knowledge, and at the same time "de-center" students from their own cultural schemata. The presence of a mixture of nationalities and backgrounds in classrooms is considered to have a strong positive effect on the 'depth' of discussions, and creates opportunities to see from new perspectives and reflect on personal biases.

On the other hand, critical thinking is used as a buzzword, strongly associated with learning English or learning in English, and in some cases, is simply assumed to be a by-product of doing so. Students are motivated to use EMI critical thinking courses as an opportunity to develop their English skills, although this is not the primary purpose of the courses, and they do not involve explicit linguistic instruction. At the same time, many instructors question the efficacy of learning critical thinking in a second language, though they tentatively suggest that they notice improvement in their student's performance during the course. Japanese students have typically had little opportunity to use critical thinking skills in their previous educational settings, yet they "step up" when studying together with students from other countries. Some have encountered indifference or resistance to the western construct of CT within their institutions, and several of the interviewees themselves wonder whether it is a skill that will serve students well in Japanese culture, or could in fact alienate them from it.

In this way, numerous contrasts and contradictions are highlighted in the findings when probing the relationship between critical thinking and intercultural communication. Through their association, critical thinking becomes compartmentalized as a specific set of skills needed by the young elite class of *global jinzai*, but is largely absent from classrooms where there is no intercultural aspect. The subtext to the use of this pedagogy in EMI programs is that students learn to selectively access this skill when in intercultural spheres, but they may have little need to do so otherwise: If it were considered important to foster in Japanese working environs, surely it would be studied in Japanese.

Yet on the other hand, the links between critical thinking and intercultural communication are also implicit. Encounters with other cultures and world knowledge lead to questioning, to re-examination of personal assumptions and biases, to the challenging of conventions: in other words, intercultural experiences lead to opportunities for critical thinking. Particularly in Japan, due to the lack of antecedents in the educational culture, it can be said that it would be difficult to teach critical thinking effectively without an intercultural element.

Social critique in the critical thinking classroom

As well as utilizing this intercultural aspect as an enabler of critical thinking, many of the instructors are clearly bringing elements of social critique into their classes, that align their notion of critical thinking with that found in Freire's critical pedagogy, and with the critical philosophical tradition that uses reason to critique social mores. Certain quotes picked out from among the six themes, strongly reflect a desire to challenge Japanese social norms, and encourage students to question conventions:

Basically, I would explain it as not accepting something as it is. I mean asking lots of questions. Not necessarily challenging, but asking a lot of questions to clarify points, but also sometimes to challenge. (Interview 6)

I'm starting on the back foot by saying, okay, culturally, everything you've learned today, throw it out the window. Because I'm now going to tell you to question your

elders, question your parents, question your professors, question everything.

(Interview 10)

I just think students need to be trained to do it ... Normalising a different way of communication. Normalising asking questions, normalising disagreement and all those things. (Interview 11)

From elementary school to high school, we were just told what to do. In elementary school we lined up in the morning. We walk as a group in line and that is not my choice. (Interview 15)

Hopefully, in the long term, they would be more willing to reflect on conventional thinking, which almost everyone participates in. (Interview 16)

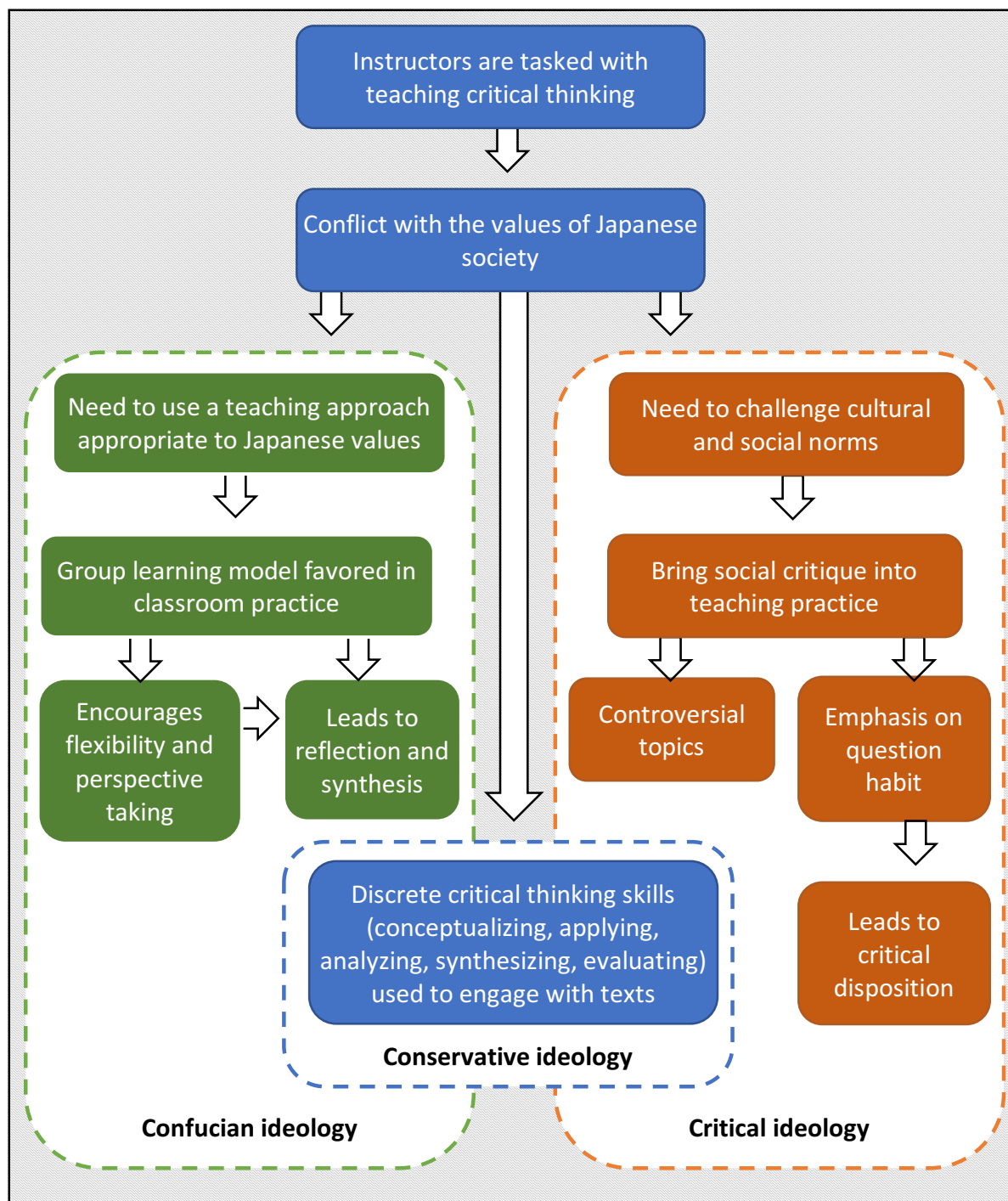
It can therefore be said that several of the teachers view challenging social norms as a necessary part of getting students to do CT, and through doing so, are making social critique part of the teaching of CT. It can be posited that this is even necessitated by the cultural circumstances, to some extent: The teachers have been tasked with teaching CT skills by university program administrators. However, this is challenging because Japanese students have been educated in an environment that values harmony in group dynamics, and in which questioning authority is frowned upon. Therefore, they need to challenge these social norms in order to prompt the use of CT skills in their classes. In order to do this, they select controversial topics and readings that are likely to get a reaction from students, and emphasize the importance of questioning in their teaching practice. The formation of

this questioning habit is linked to the aim of developing a critical disposition, as well as to the use of discrete CT skills such as inference and evidence evaluation.

At the same time as instructors need to challenge Japanese social norms, they also need to approach their classes in a way that will not alienate their Japanese students, and create an environment in which they will be comfortable. This is achieved through the egalitarian group learning models that many of the instructors favoured. By making activities such as group brainstorming and group discussion central to classroom practice, flexibility and perspective taking are encouraged, especially when there is diversity of genders, academic backgrounds and nationalities in the groups. As a consequence, group learning also leads to self-reflection and synthesis.

A model constructed of these interlinkages (figure 8.5) shows that the three elements of Confucian influence in Japanese culture; the conservative, Aristotelian philosophical tradition; and the critical, Socratic tradition that contest the concept of critical thinking in Japanese higher education, are in fact all being accessed and utilized as a means of teaching critical thinking by the instructors. Without the presence of elements of Confucian and Critical ideologies, the goal of developing students as critical thinkers (in the conservative tradition) would be more challenging to achieve. Rather than causing conflict, these ideologies can be employed judiciously to complement one another and while there are inherent conflicts in the way these philosophies conceptualize CT, they can support each other in classroom practice.

Figure 8.5. Utilization of conflicting ideologies in teaching practice.



8.8 Conclusion: Potential approaches for a critical thinking course

Based on the thematic analysis, it is possible to make a number of recommendations for the potential of a critical thinking course in an EMI program. Drawing particularly upon themes three and five, in which instructors articulated their approaches to teaching, and described obstacles, enabling factors, and outcomes, a number of suggestions can be made. These are recommendations for an ideal course design, and taken as a whole ignores the institutional constraints that many instructors felt were an impediment to the effectiveness of their courses. Therefore, while those tasked with establishing a critical thinking course in an EMI degree program might encounter resistance if trying to enact a course as described here, it is hoped that some of these guidelines could prove insightful and be incorporated. For these hypothetical purposes, the course is described without particular students in mind. However, several of the programs that instructors worked in made a critical thinking course compulsory for first year students, usually among other courses that sought to develop the foundational academic literacy of new students. Therefore, imagining the course to have a foundational purpose is useful. At the same time, many raised the beneficial aspects of drawing from a diverse pool of students from different disciplines.

Class size

Based on instructor recommendations for smaller class sizes, enabling instructors to interact closely with individual students, and the group learning models such as those used in TELL (Technology-Enabled Active Learning) (Fisher, 2010) referred to by interviewees,

classes should ideally be conducted in small tutorials of six to twelve students. Twelve would allow students to work in pairs, groups of three or four, or two groups of six easily. Consideration should also be made of the classroom layout and design to easily facilitate group work, with groups seated in circular arrangements to encourage equal relationships among discussants.

Scheduling

As many instructors expressed the view that conducting classes once a week, over one semester severely limited the potential of their courses, it is recommended that a course should be conducted on a more intensive and sustained basis. Two liberal arts programs that the interviewed instructors taught in were run more intensively, meeting two or three times a week. While these instructors considered this beneficial, they also felt that more than one semester should be allocated. Therefore, it is recommended that classes meet two or three times a week, and be run continuously over the course of a year. In this way, the critical thinking course can serve to develop the academic competencies needed by first year students, and analytical thought processes can be consolidated through repeated, longitudinal use.

Curriculum integration and course content

Taking consideration of the view expressed that students were not being given opportunities to use their critical thinking skills in other courses, and that there is generally a lack of interaction between the various instructors who teach the different courses within

a degree program, it is recommended that a critical thinking course be closely integrated with other courses. One way this could be achieved is through shared content. Critical thinking course instructors could work closely with the professors and lecturers of other content classes within the EMI program, to offer an opportunity for students to discuss their readings and lecture content in a more interactive setting. Further readings could be brought in by the CT course instructor, that approach the same themes from other disciplines, viewpoints or cultures, and other types of content including fictional texts, film and news media could also be used to offer counterpoints, show the practical application of theories, or make case studies. In this way, the critical thinking course both supports and diversifies the learning of content from other classes. It would require a close working relationship between critical thinking course instructors and professors, but this channel of communication could also be useful to support academics to incorporate activities into their classes that require a critical response from students.

Language support

As an EMI course within an EMI degree program, the course would be conducted in English, and any language learning would be incidental rather than taught explicitly. However, the cognitive challenge of learning critical thinking in a second language had been identified as an obstacle in the interviews, and several interviewees had suggested that students could benefit from language support. Additionally, as students were often motivated to take courses in order to gain English skills, failure to offer language support could be de-motivating. One way this could be achieved is through employment of senior students with strong language skills as teaching assistants, which one interviewee had

identified this as helpful. Alternatively, a form of 'blended learning' could be employed to provide language support, so that students process texts for new language and general comprehension or are provided with online vocabulary self-study tasks before coming to class. This would allow students to minimize class time spent on comprehension, and focus on analytical and evaluative thinking processes.

Assessment

Essay writing tasks were identified in interviews as the most effective means by which instructors could assess the thinking skills of their students. As this course aims to support other academic courses in which students may be assessed on written work, these assignments could be quite short, but written frequently, perhaps on a weekly basis. As formative assessments, they could be used to continuously diagnose student needs and inform instruction. In order to develop student awareness of their own thinking, these assignments could be designed to ask students to reflect on in class discussions.

9. Study three methodology: Q-methodology

The third study in the project is concerned with core research question IV:

How do students in EMI programs conceive and perceive the importance of being a critical thinker?

As Q methodology is perhaps the least known of the three methods used in this project, and has its own very particular techniques and associated terminology, it is briefly introduced here, before details of its application in the development of a survey instrument, and of the two groups of students who were surveyed are given.

9.1 Q methodology: origins and techniques

Q methodology was pioneered as the basis of a 'systematic study of subjectivity', by the British psychologist William Stephenson, which he introduced in a 1935 letter to the British science journal *Nature*. Describing it as an inversion of the commonly used 'R factor analysis' or 'Spearman factor analysis' (Stephenson, 1935), Q seeks to analyse the variability within tests (surveys) against a group of individuals (rather than the variability in a group of individuals against a test):

Factor analysis enables comparison of weight, height and other human traits to be achieved so that assertions about a population might be made. ... Any differences between variables relate to the whole population. In contrast, Stephenson sought the views of people and then applied factor analysis to their responses. In so doing he was able to explore subjective opinions in relation to a topic. This approach then, emphasises individuals measuring rather than being measured. People are correlated instead of tests (Hughes, 2016).

Stephenson's letter stated that Q could be: 'especially valuable in experimental aesthetics and in educational psychology, no less than in pure psychology' (Stephenson, 1935, p. 297). The methodology that he developed around this technique of inverted factor analysis has since been applied in a broad range of research fields, and has been defined as 'a composite of philosophy, concepts, data-gathering procedures, and statistical methods that provides perhaps the most thoroughly elaborated basis for the systematic examination of human subjectivity' (Brown qtd. in Given, 2008, p. 699). It is a methodology that allows for a deep qualitative analysis, but one that can be arrived at with statistical precision.

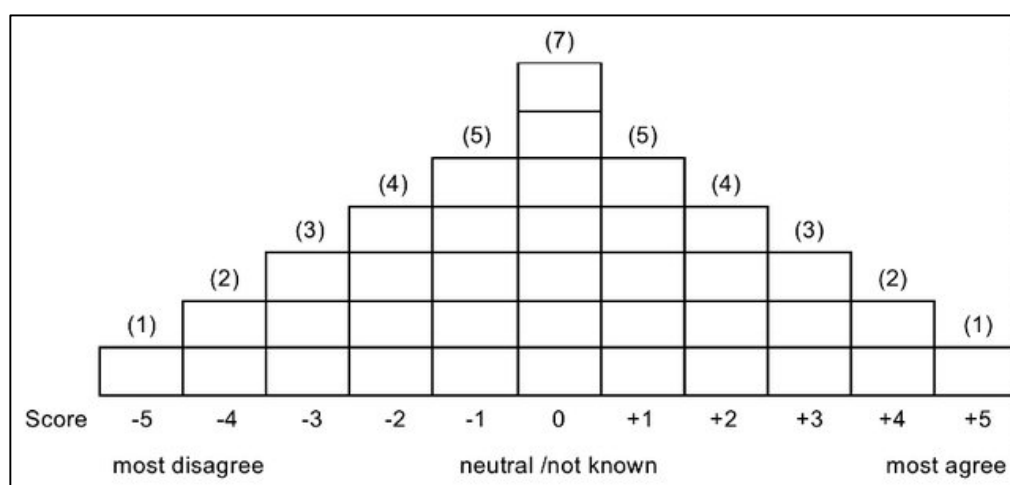
Central to the methodology is the concept of 'the concourse'; a term used to mean the universe of opinions, beliefs or ideas that exist in a given field or topic area. Whereas 'narrative' or 'discourse' are concepts that imply linearity, coherence and intertextuality, the concourse can consist of a disparate or random sampling of statements (Brown, p. 700). From all the collected statements that form a concourse of subjective positions within a field of research, the researcher narrows the number of statements down to a representative set, known as the 'Q sort'. This set of statements is the basis of the survey

instrument given to participants, who are tasked with ranking or sorting the statements on a fixed grid, according to criteria (such as whether they agree or disagree with them, or how important they consider them to be). The number of statements and corresponding size of the grid upon which they are to be arranged can vary, but the shape of the grid always follows a bell-shaped distribution curve (Watts & Stenner, 2012, pp. 70-71): narrower at both ends to allow for only one or two statements to be selected as the ones that the participant agrees or disagrees with most strongly, and wide in the center, where statements that they feel more 'neutral' towards are placed. Whereas a Likert scale, commonly used in surveys, allows respondents to freely show the strength of their sentiment towards each survey item, often resulting in 'an individual describing themselves or others in consistently positive terms' (Coe *et al*, 2017, p. 226) the Q grid restricts the choices they have. While some researchers may have concerns about imposing a 'forced distribution' onto survey participants, studies have shown that even if free distribution is allowed, the factor analysis produced may in fact end up being the same (Watts & Stenner, 2005, p. 77). In effect, what the sorting process does is it forces participants to scale their view of each survey item against all of the others. In feedback on one particular study, while some survey respondents remarked that they found the Q sorting process constrictive, completing the task required careful thought about the choices that they made, and gave a sense of thorough exploration and completion: 'feels like I've finished....it matters where it goes' (in reference to the placement of statements) (Hughes, 2016). The illustration in figure 9.1 and the example of a Q sort grid in figure 9.2 show how a Q sort is completed.

Figure 9.1. Illustration of participant engaged in arranging a q-sort on a grid (source: Hughes, 2016)



Figure 9.2. Example of a q-sort grid upon which statements (written on cards) are ranked. Participants place cards they agree or disagree with most strongly in the outermost columns, and those they feel neutral about in the middle. The arrangement of statements allows for factor analysis according to the scores that are assigned to each of the cards (Source: Yoshikawa et al., 2016)



The subsequent factor analysis of the collected surveys from a set of participants will identify several 'factors', or groupings of grids which have been sorted in a similar arrangement. Each factor therefore represents a sub-group within the group of participants with a degree of correlation between the subjectivity of each of the surveys that fit within it; a pattern in the way the surveys have been answered, and which also displays a degree of variance from the surveys that make up the other factors. Q method therefore allows the researcher to compare qualitative differences between the subjective views that exist among smaller groups within a larger group of survey participants.

9.2 Concourse and q-sample selection

In the broader scope of the research project, Q methodology was deemed to be informative, firstly to gather data on the understanding of critical thinking held by students who had experienced EMI courses in critical thinking. While instructors had been quizzed on the views of students during interviews in study two, the insights they offered about student motivation and understanding were mostly speculative, and in order to gain a direct understanding, it was necessary to directly survey their views. Furthermore, Q-methodology could also usefully serve to triangulate the data gathered from mission statements and interviews in the first and second research phases. These two data sources were revisited, and became the basis for a concourse of statements about the skills and attitudes deemed necessary to be a critical thinker. Similar to the process of coding of interview data into themes, the process of constructing a concourse is analytical and reflexive, requiring the researcher to carefully consider the wording and implications of each statement; a process

of ‘continual comparison’ and ‘identifying a theme and then clustering associated statements’ (Hughes, 2016) until a point of saturation is reached. Yet using themes or categories as a starting point, rather than developing them after the coding of the data is a reversal of the analytical process used in the second study. In this way, the construction of a Q-sort could provide a new perspective on the previously collected data.

As noted earlier, the conceptualization of ‘the concourse’ is distinct from discourse or a narrative, which are conceived as embodying a discussion or following the thread of a story. The first study in this project, was concerned with discourse as it related to CT in mission statements. The second study analyzed transcripts of interviews with CT course instructors -personal narratives of their experiences in teaching- while the description of the themes that were developed from the interviews can also be understood as a researcher constructed narrative. Combined, these two data sources provided a large number of contrasting statements about the nature of CT, it’s learning outcomes, and connections between CT and other desirable traits. By revisiting these two data sources, but rather than seek correlations and continuities within them (as the first two research phases had done), treating them as sources for a random and disparate sampling of statements that make up the universe of views on the qualities of a critical thinker, provides a fresh viewpoint on the data and research questions.

From this concourse of statements about the attributes of a critical thinker, a reduced set of 32 statements was selected as representative of all the different ideas within the concourse. These 32 statements became the basis of the survey instrument given to students. A complete list of the statements can be seen in appendix 3.

Of the 32 statements, 24 were taken from the interview transcripts and the remaining eight derived from mission statements. However, in two cases an opposing statement was created in order to add a counterpoint to statements that were found in the data. For example, statement 3: “critical thinkers have specialized knowledge about a topic” had been derived from a university mission statement (the mission statement ‘NUP2’ in appendix 1). However, as noted in chapter three, whether or not specific subject knowledge is a pre-requisite of critical thinking has been a topic of debate in the CT literature since the 1980s, between McPeck’s position that CT “must be directed toward something” (McPeck, 1981, p. 6) and Ennis who considered it something that can be taught as a general subject; the skills and attitudes of a critical thinker existing independently of discipline specific knowledge (Ennis, 1989). For this reason, statement 24: “critical thinkers do not necessarily have specialized knowledge about a topic” was added in order that both these views should be represented.

In another case, a statement was taken from an interview, in which the interviewee described a view of critical thinking that was not his own, but that he had heard and disagreed with:

I went to attend a meeting with a very prominent professor, and he rejected critical thinking out of hand as an alien, western, you know, kind of a construct that we are trying to force on poor Japanese students. I say that because that’s what he really was trying to express. And I remember this very clearly because he just, he misunderstood as far as I am concerned the whole notion of critical thinking. Alright

he completely misunderstood it. He emphasized that it is just all about, you know, making logical arguments, and being critical. Criticism. So, the way he looked at it, he described it as a very negative experience. (Interview 1)

However, this interviewee went on to explain how they themselves viewed CT as something positive and constructive. In this case both views were included in the q-sort set and are represented as statement 3: “critical thinkers take a negative attitude to a problem or issue”; and statement 19: “critical thinkers take a positive attitude to a problem or issue”. In addition, it was decided to add statement 12: “critical thinkers take a neutral attitude to a problem or issue” in order to provide a counterpoint to the two positions. Other than these two cases, all statements that appear in the q-sort set had been taken from either the interview data or mission statements, with much of their original wording preserved. Viewed as a whole, the set comprehensively represented the range of views on CT within the data; the universe of ideas within the mission statements and interview transcripts about the attributes of a critical thinker.

9.3 Participant groups

The survey was given to two groups of undergraduate student participants at two national universities in Japan, providing a total of 39 completed Q-sorts. Although software exists that can be used to facilitate Q sort surveys remotely, in this case it was deemed more practical to prepare the Q sort on cards, with a grid on a poster that each participant could stick the cards onto, and to complete the surveys in a face to face setting. The tactile nature

of the task is considered to be effective in eliciting carefully considered responses from participants, and the opportunity to survey students in one session, within their classroom environment was available. Both groups had completed one semester courses in critical thinking, taught in English by two different instructors. One of these instructors had been an interview participant in study two of this project, and the other was the author of this research. In both cases, the surveys were given during the final class of a 15-week course.

Group one (University O.) consisted of 17 students and was mostly made up of international students, hailing from countries such as Australia, Sweden, Vietnam, The Philippines, Korea, China and Japan. However, many of these students had been educated outside of the country of their birth: of the five Japanese students in the group, two identified languages other than Japanese as their first language. Several students in this class were also native or bilingual speakers of English, and all had a high degree of linguistic competence- a prerequisite of their degree program that is assessed during the screening process for admission. Most students in this class were in their first year of the university's four-year EMI social science undergraduate degree program, took all their classes in English, and were taking the critical thinking course as a required class. However, the class also included graduate students and two students from other departments, taking the course as an elective.

Group two (University S.) consisted of 22 students who were all Japanese or raised and educated in Japan. There were two students of Chinese descent in the group, but both were born in Japan and identified Japanese as their first language. All students were first year economics majors taking the course as a requirement. While their economics courses

were taught in Japanese, these students were part a select admission stream, taking part in the department's 'global talent' (literally '*global jinza*') program. As part of this program, they would go on to spend their second year studying at a partner university overseas, and write their graduation thesis in English in their final year. The critical thinking course was part of a series of EMI courses, that they took in preparation for study abroad. All students in this group had a high-intermediate to advanced level of English competency, and several had already studied abroad for periods of up to a year. However, none of them displayed the same degree of bilingual fluency as many of the students from University O. did.

9.4 Blurred lines

Between these two groups, the internationalization of Japanese universities that seeks to attract bright students from other countries to Japan as a catalyst for globalization, as well as provide 'internationalization at home' for elite Japanese students is embodied: in fact, both programs, and the critical thinking courses that are compulsory classes within them, can be said to exist as a consequence of the funding received through MEXT internationalization drives. However, viewing these two groups as a microcosm of internationalization can also highlight the complexity and the blurring of certain distinctions within this educational environment.

With the development of EMI programs, the division between language courses, which are conceived to fulfill a need for EAP (English for Academic Purposes) or CLIL (Content and Language Integrated Learning) within the curriculum, and academic content

courses that are also taught in English, traditionally delivered through lectures and tutorials by academics, has become unclear. Both groups of students are using English as a means to study critical thinking among other subjects. Although one of the course instructors was a professor with a background in psychology, and the other had trained as a language instructor, their approaches to teaching critical thinking bore similarities: relying on case studies to engage students in task-based scenarios (though approaches to classroom management, interaction style and assessment were different). While learning English is a major motivation for students in the second group to take a CT course in English (while they take EMI courses, they are not in an EMI degree program, and are preparing for overseas study), for students in the first group, development of language skills is not a primary motivating factor or need. Nevertheless, in both cases the aim of the critical thinking course is primarily to develop academic skills rather than linguistic competence.

Secondly, both groups are diverse, and applying labels such as “international” and “Japanese” to one group or the other is an oversimplification, as in both cases there are students for whom these labels do not easily fit. Even in the case of University S, which is for all intents and purposes a homogenous, ‘Japanese’ group, it includes students who have lived and experienced education abroad and two students from non-Japanese families (even though they were born in Japan and considered Japanese to be their first language). University O. on the other hand, is an ‘international’ group, yet includes Japanese students, some of whom were educated overseas, but who do not consider Japanese as their first language. Although (as shall be seen in the next chapter) marked differences in the attitude toward critical thinking between the two groups emerged from the data, the fact that such labels cannot be easily applied should be a caveat against generalizing the findings of this

research as representative of a strict Japanese/ non-Japanese binary. However, the fact that distinctions such as “international” and “Japanese” are slightly blurred in the case of these groups should not be viewed as a limitation of the findings either. Rather, it can be seen as representative of the unique intersection of nationalities, languages and educational backgrounds that occurs in the internationalized educational settings that are EMI classrooms.

10. Study three: Perceptions of Critical Thinking among International and Domestic students at Japanese Universities - A Q-Methodology Study

As described in the last chapter, the survey instrument (q-sort) was given to two student groups who had completed critical thinking courses in two separate university programs. Due to the nature of the two programs, one group was composed largely of international students and of Japanese students educated overseas, whereas the other group was made up entirely of Japanese students (or students who were born and educated in Japan). However, taking an inductive approach to the research question, the q-sorts from both groups were analyzed together as one larger group of 39. The whole point of using Q-methodology, which could analyze the variability in the tests against the group of individuals, was not to treat the two groups separately (which would impose distinctions before analysis), but to allow the factors analysis of the data to group and divide the participants according to the similarities and disparities in the way they responded to the survey, and examine the composition of each resulting factor. The resulting analysis allowed four distinct groups, with distinct views of critical thinking to be extracted from the data.

10.1 Analysis procedure

Survey analysis was performed using the specialized Q-method web-based software application, Ken Q Analysis (<https://shawnbanasick.github.io/ken-q-analysis/>; accessed July

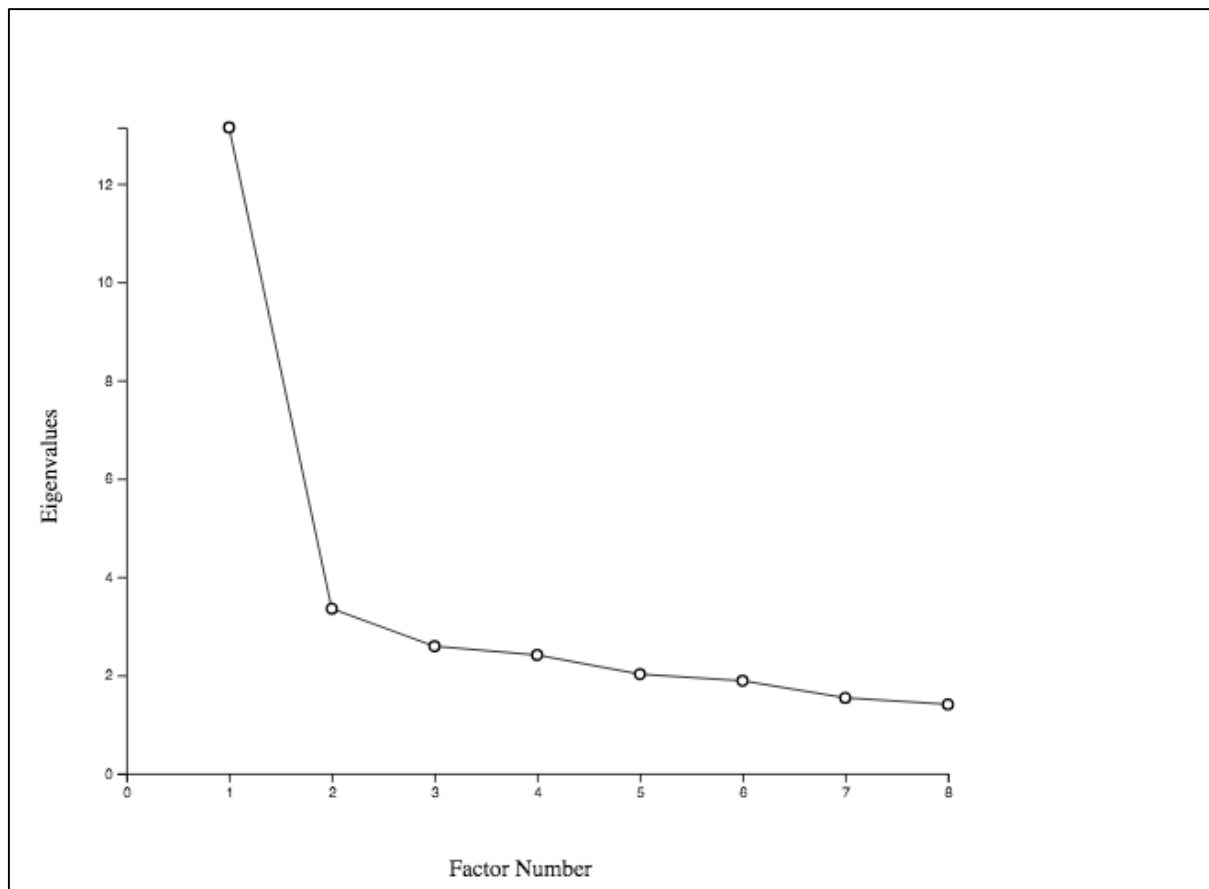
20th, 2018). Survey results from both groups of students were analyzed together, and six factors were initially extracted from the correlation matrix of 39 students, using principal component analysis. This mathematical process of factor analysis works by extracting a group of surveys from a correlation matrix of the data, and each factor that is extracted accounts for a significant proportion of variance. This process is repeated until the factors that can be extracted are no longer deemed to account for a significant portion of variance.

Carrying out this procedure using the software, the first factor accounted for 34% of explained variance, with each subsequent factor accounting for a decreasing proportion. As the first four factors accounted for a significant portion of variance at 56% (see table 10.1), and factors five and six each accounted for just five percent, it was decided to use just the first four factors in the analysis. This decision was made using a scree plot (figure 10.1), where a 'bottoming out' can be seen, with a drop notable after factor four, which is considered to be indicative of a cutoff point (Watts & Stenner, 2012, p. 106). Furthermore, at just five percent each and with eigenvalues of 2.021 and 1.8862, factor five and six can each be considered to account for less than the variance of two students, and therefore cannot be considered as significantly representative of sub-groups within the group.

Table 10.1. Eigenvalues and explained variance in factor extraction

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Eigenvalues	13.1456	3.3537	2.5894	2.4107	2.021	1.8862
% of explained variance	34%	9%	7%	6%	5%	5%
Cumulative % of explained variance	34	43	50	56	61	66

Figure 10.1. Scree plot showing the eigenvalues for factor extraction.



Using the software, Varimax rotation was applied to these two factors, a procedure that is used to highlight their distinguishing features. The resulting factor loading of each individual q-sort (the extent to which each student's survey correlates with the four factors) can be seen in appendix 4. Here, individual q-sorts were coded with "O" and "S" to indicate which university the students were from, as well as abbreviations for their nationalities ("Aus", "Jp.", "Chi.").

10.2 Four distinct views of critical thinking

The understanding of critical thinking that emerges from each group is clearly distinct, and, as can be seen in appendix 4, there is also a very clear divide between two groups that are mostly made up of Japanese students from University S. (groups 1 and 4) and two groups mostly made up of non-Japanese students from University O. (groups two and three). Furthermore, there is a high degree of correlation between groups 1 and 4, and between groups 2 and 3.

Table 10.2. Correlations between factor scores, showing a strong correlation between factor 1 and 4, and between 2 and 3.

	<i>factor 1</i>	<i>factor 2</i>	<i>factor 3</i>	<i>factor 4</i>
<i>factor 1</i>	1	0.4129	0.519	0.5881
<i>factor 2</i>	0.4129	1	0.5503	0.4132
<i>factor 3</i>	0.519	0.5503	1	0.5022
<i>factor 4</i>	0.5881	0.4132	0.5022	1

Factor one consists of sixteen students, thirteen of whom were from the 'Japanese' group (University S.). Moreover, two of the remaining three students in this group who were from University O. were also Japanese. Factor two on the other hand, consists of four students, all of whom were from the 'international' group (university O), two of whom were Japanese. Factor three consists of nine students, eight of whom were from University O, and

one from University S. Factor four also consists of nine students, with eight of this group from University S, and only one student from university O.

There is therefore a clear divide between two groups largely made up of students from one of the university programs, and two groups from the other. The possible reasons for this will be analyzed in the discussion. For now, the nationality and university program to which each student belongs to can be put to one side, in order to focus closely on the subjective viewpoints that distinguish and define the identity of each of the factors. The factor loading for each statement across the four factors can be seen on a table in appendix 3. Based on the same data, composite Q-sorts and tables showing distinguishing statements for each of the four factors are shown below, in figures 10.2 to 10.5. and tables 10.3 to 10.6.

Factor 1: Flexible and multicultural thinkers

Factor 1 students could be called ‘flexible, multicultural thinkers’. They have highlighted being flexible, perspective-taking, listening to others, and reflecting on their own thinking above other elements of critical thinking. Additionally, they rated ‘understanding multicultural perspectives’ highly, and other statements with an inter-cultural aspect such as ‘overcoming their own cultural biases’ and ‘have knowledge of global issues’ were also rated higher by factor one than by other factors.

Figure 10.2. Composite Q-sort for factor 1

-4	-3	-2	-1	0	1	2	3	4
Evaluate information independently.	Take a positive attitude towards an issue.	Ask the right questions.	Do not necessarily have specialized knowledge about a topic.	Come up with new ways of thinking about a problem or issue.	Separate their thoughts from feelings and emotions.	Reflect on their own thinking.	Take a broad perspective and look at "the bigger picture".	Have a flexible attitude towards an issue.
Take a cynical attitude towards a problem or issue.	Challenge the opinions of others.	Have persuasive writing and presentation skills	Analyze how claims for truth are made.	Are creative thinkers.	Synthesize new information with what they already know.	Don't pass judgment immediately.	Overcome their personal prejudices.	Listen carefully to others.
	Are sensitive to the emotions of others.	Have specialized knowledge about a topic.	Try to question everything.	Evaluate the logic of arguments.	Make logical arguments.	Overcome their cultural biases.	Understand multicultural perspectives.	
			Think from an ethical or moral position.	Communicate their opinion effectively.	Take a neutral attitude towards an issue.			
			Find ways to accommodate the opinions of others.	Have knowledge of global issues.	Evaluate the reliability of sources.			
				Try to test or challenge conventional wisdom.				

Table 10.3. Distinguishing statements for factor 1 by factor array and z-score.

Statement	Factor 1	Factor 2	Factor 3	Factor 4
<i>22. Have a flexible attitude towards an issue.</i>	+4 1.76	-1 -0.48	1 0.52	3 1.09
<i>5. Listen carefully to others.</i>	+4 1.62	+1 0.54	+1 0.35	0 0.49
<i>7. Take a broad perspective and look at “the bigger picture”.</i>	+3 1.5	0 0.09	3 1.42	3 1.14
<i>14. Understand multicultural perspectives.</i>	+3 1.21	+1 0.41	0 0.13	2 0.72
<i>27. Reflect on their own thinking.</i>	+2 1.13	0 0.27	1 0.34	-4 -2.37
<i>13. Overcome their cultural biases.</i>	+2 0.9	0 0.14	-1 -0.48	2 0.66
<i>10. Have knowledge of global issues</i>	0 -0.12	-1 -0.52	-2 -0.67	-2 -0.81
<i>32. Evaluate the logic of arguments</i>	0 -0.01	3 1.2	4 2.13	2 0.97
<i>23. Analyze how claims for truth are made</i>	-1 -0.47	2 0.8	3 1.24	1 0.63
<i>28. Have persuasive writing and presentation skills</i>	-2 -1.02	0 0.39	0 -0.11	0 0.01
<i>29. Challenge the opinions of others</i>	-3 -1.21	1 0.6	0 -0.06	0 0.41

In addition, students in factor one placed the least importance in logical reasoning. They placed ‘evaluate the logic of arguments’ and ‘analyze how claims for truth are made’ lower than all other groups, as well as several other statements related to reasoning such as

‘evaluate the reliability of sources’, ‘think from an ethical or moral position’, and ‘make logical arguments’. They were also less concerned with performative aspects of critical thinking such as ‘having persuasive writing and presentation skills’, or ‘challenging the opinions of others’, both of which were given a lower rating than by the other three factors. Therefore, factor 1 students can be said to consider flexibility, perspective taking and reflexivity to be the most important aspects of critical thinking, and also strongly associate CT with an intercultural dimension.

Factor two: Independent evaluators of evidence

Factor two students could be considered to be ‘independent evaluators of evidence’. They rate ‘evaluating the reliability of sources’ and ‘evaluating information independently’ highest, and other statements that they placed highly are mainly concerned with judging arguments and evidence, such as ‘evaluate the logic of arguments’, and ‘analyze how claims for truth are made’. Their focus is on identifying a critical thinker as an independent, individualist thinker, which is also shown by the fact that they rated ‘overcome personal prejudices’ and ‘synthesize new information with what you already know’ more highly than any of the other groups. Performative aspects of critical thinking such as ‘having persuasive writing and presentation skills’ and ‘challenging the opinions of others’ are rated slightly higher than other groups as well, while factor two also considered flexibility and perspective taking to be of less importance than other groups. These points place factor two in stark contrast with factor one, and indeed these two groups had the least correlation between their factor arrays.

Figure 10.3. Composite Q-sort for factor 2.

-4	-3	-2	-1	0	1	2	3	4
Take a cynical attitude towards a problem or issue.	Ask the right questions.	Find ways to accommodate the opinions of others.	Come up with new ways of thinking about a problem or issue.	Have persuasive writing and presentation skills	Communicate their opinion effectively.	Make logical arguments.	Overcome their personal prejudices.	Evaluate the reliability of sources.
Take a positive attitude towards an issue.	Have specialized knowledge about a topic.	Do not necessarily have specialized knowledge about a topic.	Are sensitive to the emotions of others.	Reflect on their own thinking.	Take a neutral attitude towards an issue.	Separate their thoughts from feelings and emotions.	Evaluate the logic of arguments.	Evaluate information independently.
	Try to question everything.	Are creative thinkers.	Think from an ethical or moral position.	Overcome their cultural biases.	Challenge the opinions of others.	Analyze how claims for truth are made.	Synthesize new information with what they already know.	
			Have a flexible attitude towards an issue.	Don't pass judgment immediately.	Listen carefully to others.			
			Have knowledge of global issues.	Take a broad perspective and look at "the bigger picture".	Understand multicultural perspectives.			
				Try to test or challenge conventional wisdom.				

Table 10.4. Distinguishing statements for factor 2 by factor array and z-score.

Statement	Factor 1	Factor 2	Factor 3	Factor 4
21. Evaluate the reliability of sources.	+1 0.45	+4 1.54	+4 1.54	+1 0.52
30. Evaluate information independently	-4 -1.51	+4 1.53	-1 -0.61	-3 -1.91
20. Overcome personal prejudices	+3 1.23	+3 1.51	0 -0.18	+1 0.5
26. Synthesize new information with what they already know.	+1 0.63	+3 1.01	+1 0.43	+1 0.57
27. Challenge the opinions of others	-3 -1.21	+1 0.6	0 -0.06	0 0.41
28. Have persuasive writing and presentation skills	-2 -1.02	0 0.39	0 -0.11	0 0.01
7. Take a broad perspective and look at “the bigger picture”.	+3 1.5	0 0.09	3 1.42	3 1.14
22. Have a flexible attitude towards an issue.	+4 1.76	-1 -0.48	1 0.52	3 1.09
11. Are creative thinkers	0 0.03	-2 -1.16	0 0.05	0 -0.02
8. Ask the right questions	-2 -0.97	-3 -1.19	2 0.94	-2 -0.77
1. Try to question everything	-1 -0.57	-3 -1.46	-1 -0.66	-1 -0.43

Factor two also did not value creativity or questioning as elements of critical thinking, giving low ratings to statements one, eight and eleven. Their understanding of critical thinking can therefore be said to be more narrowly focused on evidence evaluation and independent judgement.

Factor three: Inquisitive and innovative

Factor three students placed 'evaluating the reliability of sources' and 'evaluating the logic of arguments' highest, and similar to students from factor two, with whom they show a high degree of correlation, they define critical thinking in terms of logical reasoning and evidence evaluation, also ranking 'analyze how claims for truth are made' higher than any other groups. However, this group also placed importance on 'asking the right questions', a statement that all other groups had given a negative rating. They also displayed a tendency towards innovative idea generation not shown by other groups, by placing importance in 'coming up with new ways of thinking about a problem or issue' and 'testing or challenging conventional wisdom', and also rated 'are creative thinkers' marginally higher than other groups. They also placed less importance in overcoming cultural biases and personal prejudices compared to other groups, and do not think that critical thinkers need to give much consideration to the opinions and feelings of others, with both 'find ways to accommodate the opinions of others' and 'are sensitive to the emotions of others' given low ratings.

Therefore, while similar to the factor two group in terms of considering the evaluation of logic and evidence most important, factor three students differ in terms of their inclination towards creative problem-solving and generating new ideas, where factor two was inclined towards being persuasive and challenging others. Factor three can therefore be considered to be 'inquisitive innovators'.

Figure 10.4. Composite Q-sort for factor 3.

-4	-3	-2	-1	0	1	2	3	4
Take a positive attitude towards an issue.	Separate their thoughts from feelings and emotions.	Have knowledge of global issues.	Take a neutral attitude towards an issue.	Communicate their opinion effectively.	Have a flexible attitude towards an issue.	Don't pass judgment immediately.	Take a broad perspective and look at "the bigger picture".	Evaluate the logic of arguments.
Take a cynical attitude towards a problem or issue.	Find ways to accommodate the opinions of others.	Have specialized knowledge about a topic.	Think from an ethical or moral position.	Overcome their personal prejudices.	Synthesize new information with what they already know.	Ask the right questions.	Analyze how claims for truth are made.	Evaluate the reliability of sources.
	Are sensitive to the emotions of others.	Do not necessarily have specialized knowledge about a topic.	Overcome their cultural biases.	Understand multicultural perspectives.	Try to test or challenge conventional wisdom.	Come up with new ways of thinking about a problem or issue.	Make logical arguments.	
			Evaluate information independently.	Are creative thinkers.	Listen carefully to others.			
			Try to question everything.	Challenge the opinions of others.	Reflect on their own thinking.			
				Have persuasive writing and presentation skills				

Table 10.5. Distinguishing statements for factor 3 by factor array and z-score.

Statement	Factor 1	Factor 2	Factor 3	Factor 4
32. Evaluate the logic of arguments	0	+3	+4	+2
	-0.01	1.2	2.13	0.97
21. Evaluate the reliability of sources.	+1	+4	+4	+1
	0.45	1.54	1.54	0.52
7. Take a broad perspective and look at “the bigger picture”.	+3	0	+3	3
	1.5	0.09	1.42	1.14
23. Analyze how claims for truth are made	-1	+2	+3	1
	-0.47	0.8	1.24	0.63
9. Don’t pass judgement immediately.	+2	0	+2	0
	0.95	0.07	1.02	0.33
8. Ask the right questions.	-2	-3	+2	-2
	-0.97	-1.19	0.94	-0.77
31. Come up with new ways of thinking about a problem or issue.	0	-1	+2	+1
	0.3	-0.29	0.67	0.52
4. Try to test or challenge conventional wisdom.	0	0	+1	0
	-0.13	-0.23	0.4	0.25
11. Are creative thinkers	0	-2	0	0
	0.03	-1.16	0.05	-0.02
14. Understand multicultural perspectives.	+3	+1	0	2
	1.21	0.41	0.13	0.72
20. Overcome personal prejudices	+3	+3	0	+1
	1.23	1.51	-0.18	0.5
13. Overcome their cultural biases.	+2	0	-1	2
	0.9	0.14	-0.48	0.66
25. Separate their thoughts from feelings and emotions.	+1	+2	-3	+4
	0.69	0.86	-1.15	1.67
17. Find ways to accommodate the opinions of others	-1	-2	-3	-1
	-0.79	-0.85	-1.26	-0.18

Factor four: Balanced, flexible evaluators

The fourth factor's view of critical thinking can be considered as a kind of hybrid between placing importance in flexibility and perspective taking (like factor 1), and valuing reasoned argumentation (like factor two). They have ranked 'separating thoughts from feelings and actions' and 'making logical arguments' highest, and also consider 'taking a neutral attitude towards a problem or issue' a high priority, which was not considered important by any of the other groups. Therefore, they can be considered to place importance in taking a balanced view, putting emphasis on logical argumentation. However, they have also rated 'taking a broad perspective', 'having a flexible attitude towards a problem' and 'understanding multicultural perspectives' highly. The correlation between factors one and four is the highest, and they clearly share an emphasis on broad-mindedness and intercultural understanding with students of this group. Yet whereas factor one had rejected logical reasoning, this group values it.

At the same time, they downplayed the importance of other attributes that were rated highly by factor one and two: 'listening carefully to others', 'evaluating information independently', and 'reflecting on their own thinking', were all considered of less importance by this group. Ultimately, their understanding of critical thinking seems to be focused on two elements: being broad-minded and flexible on the one hand, and being neutral and balanced on the other.

-4	-3	-2	-1	0	1	2	3	4
Are sensitive to the emotions of others.	Take a positive attitude towards an issue.	Do not necessarily have specialized knowledge about a topic.	Find ways to accommodate the opinions of others.	Listen carefully to others.	Analyze how claims for truth are made.	Evaluate the logic of arguments.	Take a broad perspective and look at "the bigger picture".	Separate their thoughts from feelings and emotions.
Reflect on their own thinking.	Take a cynical attitude towards a problem or issue.	Ask the right questions.	Communicate their opinion effectively.	Challenge the opinions of others.	Synthesize new information with what they already know.	Understand multicultural perspectives.	Take a neutral attitude towards an issue.	Make logical arguments.
	Evaluate information independently.	Have knowledge of global issues.	Try to question everything.	Don't pass judgment immediately.	Evaluate the reliability of sources.	Overcome their cultural biases.	Have a flexible attitude towards an issue.	
			Have specialized knowledge about a topic.	Try to test or challenge conventional wisdom.	Come up with new ways of thinking about a problem or issue.			
			Think from an ethical or moral position.	Have persuasive writing and presentation skills	Overcome their personal prejudices.			
				Are creative thinkers.				

Figure 10.5. Composite Q-sort for factor 4.

Table 10.6. Distinguishing statements for factor 4 by factor array and z-score.

Statement	Factor 1	Factor 2	Factor 3	Factor 4
<i>25. Separate their thoughts from feelings and emotions.</i>	+1 0.69	+2 0.86	-3 -1.15	+4 1.67
<i>2. Make logical arguments</i>	+1 0.59	+2 0.94	+3 1.18	+4 1.39
<i>12. Take a neutral attitude towards an issue.</i>	+1 0.45	+1 0.68	-1 -0.33	+3 1.1
<i>17. Find ways to accommodate the opinions of others</i>	-1 -0.79	-2 -0.85	-3 -1.26	-1 -0.18
<i>10. Have knowledge of global issues</i>	0 -0.12	-1 -0.52	-2 -0.67	-2 -0.81
<i>30. Evaluate information independently</i>	-4 -1.51	+4 1.53	-1 -0.61	-3 -1.91
<i>16. Are sensitive to the emotions of others.</i>	-3 -1.4	-1 -0.35	-3 -1.39	-4 -1.91
<i>27. Reflect on their own thinking.</i>	+2 1.13	0 0.27	1 0.34	-4 -2.37

10.3 Discussion

Looking at a breakdown of the university programs students belonged to, their nationalities and genders makes for a complex picture that is difficult to draw clear inferences from. Table 10.7 provides a summary of the factor loadings shown in more detail in appendix 4. What is clear is that Factor 1 and 4 are predominantly made up of students from University S (21 out of 25 students), a mostly homogenous Japanese group. By contrast, Factor two and three are almost exclusively from the multicultural group of students at University O. (with just one student from University S.). There is therefore a

clear divide between the students from the two university programs. Furthermore, factor one and four showed a high degree of correlation (0.5881), as did factor two and three (0.5503; see table 10.2).

Table 10.7. Breakdown of universities students belonged to, nationalities and genders across four factors. (This table accounts for 38 of the total of 39 students shown in appendix four. One student's factor loadings (student 7; see appendix 4) were split across two factors and they could not be clearly flagged for any of the four factors).

	Total number of Q-sorts	Students from University O. (International)	Students from University S. (Japanese)	Nationalities of students	Gender
Factor 1	16	3	13	Japan (14) Korea (1) China (1)	Male: 5 Female: 11
Factor 2	4	4	0	Japan (2) Malaysia (1) China (1)	Male: 0 Female: 4
Factor 3	9	8	1	Japan (2) Korea (2) Philippines (1) Taiwan (1) Sweden (1) Australia (1)	Male: 4 Female: 5
Factor 4	9	1	8	Japan (7) Philippines (1) China (1)	Male: 7 Female: 13

Nationality is more difficult to describe with certainty. Both groups include Japanese students, but those in the international program at University O. were educated overseas or in international schools. Both groups include Chinese students, but the two from University S. were both born in Japan, considered Japanese to be their first language, and entered

their university program through the same admission stream as Japanese students. The one Chinese student at University O. was born in China, and was studying in Japan as an exchange student. Simply dividing the groups according to the nationality on their passports does not effectively describe their identities within the two university programs.

Notwithstanding this, there are some clear divisions. Factor one and four are predominantly made up of Japanese students. Factor three is mostly non-Japanese. Of four students in factor two, two are Japanese (though both came from the 'international' program). A distinction based on nationality is more difficult to make, though 20 of a total of 24 Japanese students are in factor one and four.

Gender provides few clear insights into the breakdown of the groups. With a total of 16 male and 22 female students (a 42/58 percent split), all four factors have more female than male students. Factor three is a near equal split, whereas factors one and four have a higher proportion of female students. The four students in factor two are all female, though this number is too low to be able to draw any clear statements about a critical thinking conception according to gender from this group.

Therefore, the clearest distinction that can be made is between the two classes, which is also a distinction between a multicultural international student group (factors two and three), and a more 'homogeneous' Japanese group (factors 1 and 4). This Japanese group is made up of two factors: 'flexible and multicultural thinkers' (factor one), who placed emphasis in flexibility, perspective taking, listening to others, and reflexivity, while rejecting logical argumentation; and 'balanced, flexible evaluators' (factor 4), who also

recognized the importance of flexibility, but considered logical argumentation of most importance. Across the two factors then, flexibility and perspective taking can be said to characterize the Japanese student's conception of CT, with the largest, factor one group rejecting the importance of logical argumentation, while factor four incorporate it.

With factor two and three, both factors considered logical argumentation paramount. Factor two, the 'independent evaluators' are most clearly focused on evidence evaluation in their definition of CT, and reject perspective taking and flexibility. The 'inquisitive innovators' of factor three however, relate logical argumentation to problem solving, and include questioning, breaking with convention, and coming up with new ideas in their conception of CT.

What can be clearly stated from this complex range of views, is that the association between critical thinking and a flexible, broad-minded attitude is characteristic of the homogeneous Japanese group, and not of the international students group. It was also, perhaps ironically, this Japanese group rather than the multicultural group who placed value in multiculturalism as part of their understanding of CT.

Possible explanations

There are several possible explanations that could be influencing the association that Japanese students have made with perspective taking and critical thinking here. One explanation is cultural. The fact that they tend to view critical thinking introspectively, that they hesitate to pass judgement, and place lower importance on logical analysis of

evidence, might be interpreted by some as a failure to grasp the essence of the critical thinking as it is understood in a Western philosophical tradition, and supports Atkinson's view of CT as inaccessible to students from countries where this is not part of their cultural behavior: 'discoverable if not clearly self-evident only to those brought up in a cultural milieu in which it operates' (Atkinson, 1997, p.89). However, it could also be interpreted not as a failure to understand critical thinking, but rather as indicative of the way CT operates in a high-context culture, where cautious observation, deferment of judgement and flexibility must be exercised in order to critically evaluate issues. A rhetorical approach to argumentation that does not pay attention to the elements of communication which are not explicitly verbalized is less effective here. In a Japanese context, where maintaining harmony within a group is valued, finding a way to accommodate different perspectives is viewed as critical, while challenging others might not be. One function of culture, as Edward T. Hall wrote: 'is to provide a highly selective screen between man and the outside world. In its many forms, culture therefore designates what we pay attention to and what we ignore' (Hall, 1989, p.85). If culture is viewed as an interface or schema in this way – a social construct that provides cohesion – then critical thinking *is* cultural thinking in the sense that it provides the cultural reflexivity that is needed to navigate and filter culture, and accordingly must be done differently to guide beliefs and actions according to the different cultural context.

A second explanation relates to the social structures that underlie different educational environments that these students have experienced. The defining factor between the two groups of students may not be the color of their passports, but rather their educational background. Those who have experienced an international education have

a view of CT that is more output-oriented because they have been instructed and assessed on their ability to construct and defend logical arguments in class, and to write persuasively. Although educational reform discourses in Japan have aimed to incorporate such qualities into the classroom practice of Japanese schools (Central Council of Education, 2008), the reality is that much of what Japanese students experience in their education is still centered around assessment on standardized, multiple choice tests that demand rote memorization of a large volume of information. The weight given to these tests for university entrance leaves little time for the development of other skills, and classroom practice in the Japanese public-school system is still dominated by a teacher-centered “chalk and talk” model (Yamamoto et al, 2016, p.42). Students who succeed in such environments may well be inclined to view receptive skills such as listening carefully, or understanding multiple perspectives as critical.

A third possible explanation is teacher effect. Although the instructors of the two critical thinking courses may have had a similar general approach, there are invariably certain idiosyncrasies to their teaching that may have influenced the students in each class respectively. Despite the existence of many standard definitions of critical thinking, educators and practitioners often feel the need to develop a personal or working definition that helps students grasp the particular skills they will need to use in that class. The validity and necessity of these personal definitions to each teacher’s academic discipline and teaching context has been observed in a number of case studies (Esterle & Clurman, 1993). In the case of the two instructors of the groups in this study, statement 23: “analysing how claims for truth are made” was the personal definition used in class by the instructor for university O. This instructor had participated as one of the interviewed instructors in study

two, and the statement had been taken from the interview transcript. This statement was valued highly by students from factor two and three, which mostly consisted of students from this class, while it was rated negatively by factor one. Although no single definition was explicitly used by the instructor from university S, weekly classroom practice involved ‘fishbowl discussions’ in which a small group of students would participate in a discussion or debate, and other students would listen, take notes, and write a self-reflection task to explain whether their own perspective on a given issue had changed through listening to the discussion. This could be a reason that factor one students rated listening to others and self-reflection highly, while factor two viewed reflexivity as unimportant. In this manner, the particular emphases given by each instructor may be assimilated by students and come to shape their own understanding.

A fourth possible explanation could be that students have been influenced by broader social discourses surrounding critical thinking. In study one, the discourse analysis found that perspective taking was frequently associated with CT in university mission statements, and that there was an intertextual relationship between these, and the competencies sought by the MEXT through directives such as *ikiruchikara* and *gakushiryoku*. In fact, statements such as number 10 (‘Have knowledge of global issues’), and 14 (‘Understand multicultural perspectives’) had been drawn from the university mission statements used in study one. Students may have encountered the term critical thinking through these mission statements, or other related texts, and as a result have made an association between critical thinking and perspective-taking, when presented with a q-sort that has in fact, sampled some of these texts. These discourses are strongly connected to the image of globally-minded human resources or *global jinzai*, and indeed, students in the

group from university S. are part of their Economics faculty's *global jinzai* program, so there is an affinity between their personal aims and these discourses, as may be the case for many students attracted to EMI courses and programs.

10.4 Conclusion

It is difficult to conclusively ascribe greater influence to any one of these explanations over the others without further investigation, and there is scope for building on this work in future. As far as is known, no other studies have used Q-methodology within this field, and it has brought attention to some interesting viewpoints on critical thinking. Putting aside questions of nationality and cultural identity, the fact that this study has highlighted four distinct understandings of CT raises other questions that could be taken up, such as the relation between critical thinking and personality. While some studies have been done to investigate the critical thinking skills of different personality types, using personality tests (such as the Myers-Briggs) and critical thinking measurements such as the Watson-Glaser Critical Thinking Appraisal (Leitsch & Van Hove, 1998), and they have shown that certain personality traits perform better at critical thinking. However, this study could suggest that different personalities have different critical thinking aptitudes and could be inclined towards different aspects of CT. Though this is beyond the scope of the investigation here, there is clear potential for other insights that can be gained using Q-methodology.

Upon completing the Q-sort, each student was given an open-ended questionnaire, and could comment freely on their own q-sorts. While their responses also give little clue as

to what might have influenced their conception, one Japanese student from the factor one group wrote a comment that articulates why this student thought that seeing from various perspectives was paramount:

I think that critical thinkers don't necessarily need persuasive writing and presentation skills. That is not so important for just being a critical thinker. And obstacles to becoming a critical thinker are prejudice, bias and being selfish. Specialized knowledge sometimes becomes an obstacle to look at issues from a neutral perspective, but the wider the knowledge you collect, the easier it is for you to think critically.

Whether this student's understanding of critical thinking was shaped by their culture, their educational experiences, their course instructor, or by wider social discourse is difficult to conclude. What is clear is that this student has thought critically about the question, and taken a balanced, reasonable and independent view that is very much their own. The two student groups investigated here can be seen as encapsulating the two aims of internationalization to bring international talent into Japanese universities and promote 'internationalization at home', and shows some discrepancy in the way students conceive CT from these perspectives. Yet while critical thinking may be a contested concept in relation to the internationalization of education in Japan, and different ideologies compete to shape what happens in the classroom, the quotation also shows that students also have agency to navigate, filter and nuance their own views, as they perceive and conceive their own understanding.

11. Executive findings and conclusion

The findings of three studies have been presented and together with the literature review in chapter three, they have each shed light on the way critical thinking is understood by the different stakeholders who have a primary interest in the way that critical thinking is conceptualized and propagated as an outcome, through international education at Japanese universities. In the concluding paragraphs of the third study, connections with the findings from the first two studies have already been discussed to some extent, and the purpose here is to seek out further points of comparison between the three studies, in reference to the five core research questions that inspired them. However, first it is worth recapping the main findings of each, and considering the extent to which they provided answers to the research questions. These are discussed in order below.

1. What is the impetus for the MEXT's interest in critical thinking, and how has it been framed in their education policies?

Through the review of literature in chapter three, the impetus for the MEXT to take an interest in critical thinking could be identified in the economic circumstances that are the drivers for internationalization. With an aging population and diminishing workforce, and the growth of other country's economies, particularly in other Asian countries, there is a need for Japanese companies to focus their businesses on overseas markets and operate their overseas branches more effectively, in order to maintain competitiveness. Many companies in Japan recognize the need for improved training and education in order to

foster the human resources to meet these needs, and pressure for education reform has come from the *Keidanren*, Japan's powerful business lobby, and the Ministry of Economy, Trade and Industry (METI). In the discourses of education reform resulting from this need, the term *global jinzai* has been used to describe the elite business talents that the circumstances call for.

Among other policy directives with similar purposes, *gakushi-ryoku* (Central Council of Education, 2008), which set out the attributes that the MEXT expects graduates to acquire upon completion of undergraduate tertiary study, could be identified as a clear expression through which critical thinking is constructed as a key competency for *global jinzai*. Under categories of knowledge, skills and attitudes, 'understanding multiple and diverse cultures', 'logical thinking', 'problem solving skills', 'autonomy/ self-management', and 'a sense of ethics' are listed among the thirteen competencies, and it is in these terms that the MEXT frames its understanding of CT.

EMI (English as a medium of instruction) has been identified as one way that these skills can be fostered, by meeting the two needs of attracting highly skilled students from other countries to study in Japan, and promoting opportunities for Japanese students to encounter 'internationalization at home'.

2. *How is the concept of critical thinking framed by course administrators, and what role does it play in constructing the identity of undergraduate, EMI degree programs?*

Study one sought to understand how critical thinking was framed in the discourse of university mission statements, and how these texts were used to construct the identity of EMI degree programs. In a social context defined by marketization, internationalization and the increased stratification of universities in a competitive market, these texts employed an omniscient yet opaque author's voice, to negotiate the scrutiny of multiple audiences. An emphasis on critical thinking was one way that these texts sought to distinguish the identity of their EMI degree programs, and CT was constructed as a central means by which the goal of 'cultivating' students as *global jinzai* would be achieved. The texts emphasize perspective-taking and flexibility as essential aspects of critical thinking, yet despite *saying* that students will become autonomous, worldly, critical thinkers through undertaking the programs, the texts themselves treat students as passive recipients of their education, with little say in their future outcomes.

3. *How do instructors of English medium critical thinking courses at Japanese universities, conceptualize critical thinking and how is their understanding manifested in their teaching practices?*

Study two approached the question of how instructors of EMI critical thinking courses conceptualized it and the teaching approaches that they took. They most frequently identified their own experiences of higher education as having shaped their critical dispositions, yet sought to emphasize critical thinking to their students not as an academic competence, but as a practical life skill. They most frequently considered the formation of a question habit as the defining essence of critical thinking that they highlighted in their teaching practices, and the pedagogical decisions they described resembled an 'infusion'

approach, whereby critical thinking skills are practiced in an applied way, approaching discussion themes through texts from multiple disciplines.

While they subjectively considered such an approach effective in helping students to apply critical thinking skills, they also expressed significant doubts about the efficacy of their courses, due to the challenge faced by students who must learn abstract thinking processes in a second language, and institutional constraints that limited the potential of their classes. They thought Japanese students had few opportunities to practice critical thinking in other classes, and lacked an intrinsic motivation to learn about critical thinking. They also suggested that CT skills were not valued in Japanese society, and thought becoming a critical thinker might in fact become an alienating experience for students. Through analysis of the themes in this study, links between critical thinking and intercultural communication became apparent, and this connection was understood to be necessary to give critical thinking education purpose and meaning in this environment. Furthermore, the underlying philosophies that contest the concept of critical thinking in the field were found to have a complimentary role in classroom practice.

4. How do students in EMI programs conceive and perceive the importance of being a critical thinker?

The third study took statements about the qualities of critical thinkers from the mission statements in study one and the interview transcripts in study two to construct a ‘concourse’ of subjective views on the attributes that define a critical thinker. This concourse was used to develop a Q-sort: the survey instrument used in Q-methodology. The

survey was given to two groups of students in EMI critical thinking courses at different universities: one group predominantly made up of international students, the other Japanese. Although the two group's survey responses were analysed together, the statistical process of factor analysis found four distinct patterns in the way that surveys were answered, creating a rich and complex picture of the views that exist in the classroom. What was clearly discernible was that perspective-taking, flexibility, listening, and reflection were highly valued aspects of critical thinking to Japanese students experiencing 'internationalization at home'. This suggests that critical thinking has a distinctly nuanced meaning for Japanese students in this educational environment; one which is culturally attuned and may be influenced by their educational experiences, course instructor, or the broader discourses surrounding internationalization.

Points of comparison between the three studies

One point of comparison between the three studies is the differing emphasis placed on the attributes of a critical thinker from the point of view of each stakeholder. While the university mission statements connected critical thinking to numerous skills, perspective taking and flexibility are those that came up with the greatest frequency. However, for the instructors who teach EMI critical thinking courses in these programs and others, central to critical thinking is the formation of a question habit. While the interviews identified various qualities, having the curiosity and healthy scepticism to ask questions came up with the greatest frequency and was spoken of with gravitas. In the third study however, only the factor three students placed importance on asking questions. Rather, the 'Japanese' group's version of critical thinking had affinity with the mission statements from study one, in so far

as they also identified perspective taking and flexibility as paramount, whereas the ‘international’ student group thought of critical thinking in terms of logical analysis. Clearly there are some contrasts and conflicting interests here, and there appears to be a disparity between what instructors consider the essence of critical thinking to be, and the views held by students, or disseminated by university administrators. Instructors perhaps can be said to be seeking a critical disposition, through an idealized image of a critical thinker, whereas universities and students are interested in critical thinking rather as a set of skills. In this case, do instructors need to adjust their view, to better fit with the values emphasised by students and schools, or does their understanding of critical thinking as an attitude or disposition need to be better understood by administrators?

A further area where comparisons can be made between the studies is to look at the link that is made between critical thinking and internationalization in this socio-cultural context. Core question five is interested in probing this connection, and considering the efficacy of critical thinking education in Japan as a whole:

5. To what extent are the MEXT’s ambitions for promoting CT being achieved through EMI programs?

In mission statements, critical thinking was constructed as a means to an end. Echoing governmental discourses of education reform, these texts viewed critical thinking as a bridge: part of an interconnected set of skills that would develop students towards the goal of becoming *global jinzai*. While as texts they negotiated different audiences, this

intertextuality with government discourse is revealing of the power relationship existing between universities and the MEXT. Japanese students who enrol in EMI programs may also have been influenced by the discourses of *global jinzai* as well as other factors, to view critical thinking as a part of the intercultural competence that is necessitated in their own ambitions. For the instructors tasked with teaching critical thinking skills through EMI courses, the implicit connections between critical thinking and intercultural communication need to be exploited to motivate students, and justify their approach to teaching skills that are not inherently found or valued in Japanese culture, society and educational practices. Furthermore, the diversity now found in many Japanese universities (not only in EMI programs) requires Japanese and international students to take in different perspectives and be flexible. The connection between critical thinking and the internationalization of Japanese universities is therefore made essential by the need to mediate between cultures.

However, though internationalization is a trend that has broad implications for Japanese society beyond the gates of universities, through internationalization, critical thinking has been constructed as a skill needed only by the new social elite of *global jinzai*. Outside of these international education environments, it is undervalued, and a critical disposition could potentially be a cause of conflict in a society that has long valued the conformity brought by harmony and homogeneity. Thinking that could challenge conventional wisdom is subversive, and those in control of education may have an ulterior interest in utilising critical thinking rather than other critical pedagogies, and in limiting its dissemination to privileged elites.

Yet what can be understood from the three studies is that the aspects of critical thinking that are accentuated in Japanese higher education also make it relevant to the broader Japanese social context. This version of critical thinking, focused as it is on perspective-taking, flexibility, withholding of judgement, and reflexivity, fits this social context, and is needed to navigate the cultural schema. It is an understanding shaped by the Japanese socio-cultural context, but which also has the power to transform it.

12. Evaluation

Through three studies, the social construction of critical thinking in Japanese universities under the influence of internationalization has been explored, and an understanding of the phenomenon from differing perspectives has been reached. The qualitative, multi-method research design has highlighted the different values sought in a concept of critical thinking by primary stakeholders. This design has allowed exploration of the complexity of the topic, and clear distinctions have been made between the way critical thinking is conceived by university administrators, course instructors and students. The second study also provided insights into the way critical thinking education is practiced in EMI programs, and it was possible to develop recommendations for course design from this, that would be useful to program developers. Through the three studies, the necessity of critical thinking to intercultural competence has been identified as the *raison d'être* for the link that has been made in Japan between critical thinking and internationalization, and the analysis has allowed for wider social implications to be touched upon as well.

The selection of three methods based on different qualitative methodologies was made with the nature of each data source in mind, and allowed not only for the topic to be approached in different ways, but for the language used to communicate an abstract concept to also be treated in different ways: As discourse, with different sides and power relations that pull the concept in different directions; as narratives constructed by interviewees and a narrative constructed in the researcher's framing of the analysis, which gives the concept a continuity and linearity; or as a concourse of randomly sampled and

disparate conceptions that make up a universe of subjective views. These differing methodological treatments of the mode of communication allow for innovative triangulation between the studies. The use of Q-methodology in particular, by sampling data from the first two studies, has facilitated corroboration, and for exploratory research to be carried out in a precise, data-driven manner. The use of mind-maps during interviews and as a means of triangulating the interview analysis, was also a novel technique, with potential for further use.

At the same time, the findings of this research are not without their limitations. Each qualitative study was carried out on a relatively small scale, and the extent to which the findings could be generalized is questionable, although each data set is representative of the social phenomenon. In the first study, for example, although only six mission statements were used, others had been excluded because they did not fit the remit of exploring the interaction of critical thinking and internationalization. The six EMI program mission statements that were analysed, emphasized critical thinking because of their strong links with internationalization. In this case, sample size was limited by availability, and the specific nature of the research area. The same could be said of the other two studies as well.

A further issue is that many of the research findings deal with perceptions. Especially in the case of interviews in the second study, instructors described how they perceived the motivation of students, the improvement of critical thinking skills, the way other classes are taught at Japanese universities, the usefulness of critical thinking in Japanese society. Their views are highly subjective and their conclusions are frequently based on supposition. As was revealed in the third study (and which my own teaching experience constantly reminds

me), what instructors perceive to be important and students consider important are often very different things. In order to categorically know about student motivation, or skills development for example, further investigation would be needed, and in these cases quantitative methods would be illuminating. Such studies have potential to develop knowledge in the field. However, it was not within the aims and scope of this research to investigate these areas, whereas the differing perceptions of critical thinking were the objective. In this respect, the findings of the three studies could not have been easily achieved with other approaches, and their combination has allowed the complexity of the phenomenon to be viewed from many facets.

University internationalization is an area of continuous development in Japan. Programs that experienced teething problems in their infancy are being redeveloped and consolidated in new cycles of innovation, while demand for new EMI programs and courses will likely increase as international student numbers continue to grow. At present, there is a perceived need for critical thinking education for globally-minded elite students, but as internationalization of universities and the globalization that it arbitrates become a catalyst for the diversification of Japanese society, intercultural communication will be of relevance in broader spheres, and further study of the role of critical thinking will certainly be of relevance. This research has provided some understanding of the reasons and goals driving the trend, yet given the cultural, sociological and pedagogical obstacles to critical thinking education that have been discussed, there is a need for research going forward that is concerned with the quality and effectiveness of programs. The research undertaken here can hopefully continue to be of relevance and provide guidance.

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Appendix 1: Six University Mission Statements

Six mission statements analysed in chapter five are presented here. Names of universities have been removed and programs are referred to as NUP1 (National University Program 1), PUP2 (Private University Program 2) etcetera. Otherwise texts appear here as they were originally published online on the universities homepages (Retrieved: July 2017).

NUP1

NUP1 aims to cultivate self-motivated, reflective students who have a sophisticated knowledge base and the necessary practical skills to meet the challenges that they will face in our fast-changing, globalized world. At the same time, it aims to nurture students who have a well-defined area of expertise and who are able to bring workable solutions to a variety of problems and issues in their field.

This exciting and innovative program is being offered in collaboration with other schools, graduate schools, and research centers at the university. In addition to providing an English language-based program that develops critical thinking and human science research skills (both qualitative and quantitative), it is also expected that students will develop a high-level proficiency in Japanese.

From the fourth semester, students will major in either **Global Citizenship** or **Contemporary Japan**. The Global Citizenship Major is intended to provide a learning environment in which students acquire the necessary knowledge, skills and attitude for reflecting critically on and engaging positively with global issues. The Contemporary Japan Major aims to provide students with a Japanese studies curriculum that encourages the development of informed, critical and multicultural perspectives on Japan,

These two majors are not separate, but will be effectively integrated in order to nurture '**GLocal actors**' who can think and act both locally and globally.

NUP2

NUP2 aims to cultivate future citizens who will not only understand and respect their own country's history and culture but can also adopt an international outlook and a broad worldview, combine specialized knowledge with flexible problem-solving skills, and pair a pioneering spirit with strong critical thinking abilities in order to take on positions of leadership in public life.

Our liberal arts program, while providing students with a wide and deep general education and developing their sense of the richness of humanity, also prepares them to move on to specialized fields of study. This foundational education gives students the critical thinking skills they need to evaluate information independently and intelligently and nourishes in them the ability to discern the individual paths they each must follow as they progress into specialized fields.

NUP3

Ideas underpinning NUP3 education

The important mission of basic learning is to implement diverse teaching methods for diverse fields of basic knowledge based on a class structure that will enable students to exchange knowledge at a multidisciplinary level. The Faculty seeks to encourage students to learn or acquire the following: (1) a creative and critical spirit that will engender reflective thought, (2) flexible thought processes and attitudes, (3) broad perspectives and the skill to take in the bigger picture, (4) deep understanding of ethics and morals, (5) humility and rich sensitivities, and (6) deep understanding of humanity. If students are able to acquire mindsets and attitudes concerning basic concepts and studies, they can also be expected to go on to easily acquire advanced knowledge and skills in specialist and graduate education based on the foundational conceptual framework they have acquired in basic learning. In this sense, basic education is an extremely important undertaking and represents a crucial period that will form the core of a student's university education.

Active learners

"Individuals who are constantly looking to learn new things and add to their pool of basic learning, who are blessed with a fearless spirit to challenge and take action against unfamiliar issues and circumstances." Active learners who, even in the face of new and unforeseen circumstances, are able to surpass conventional frameworks and ways of thinking to accurately analyze the issues at hand and make liberal use of multifaceted perspectives for knowledge (distinguishing between an insect's eye and a bird's eye). Who, while doing so, are able to exert finely-honed sensitivities and flexible insights to discover and solve issues. An important mission of universities is to develop such active learners who are capable of wielding creative and critical thought to come up with constructive solutions for a variety of challenges facing society. The development of such individuals requires education of a kind that does not isolate students into individual specialist fields but which places emphasis on exchanges of knowledge between people with different ways of thinking and values, as well as learning that is based on concept and dialog driven lessons that are open to various styles and circumstances along with the notion of learning from setbacks and failure. It is through these educational experiences that students become aware of how people's understanding of things differs according to their perspective, and develop creative thinking that enables them to subject their own ideas and those of others to critical scrutiny, instilling in them the capability to understand things from diverse perspectives and the will to pursue the truth of matters.

PUP1

“Education and Research Objectives”

The Faculty offers an English-language liberal arts curriculum in which students are encouraged to study specialized subjects (comparative culture, social studies, and international business and economics) in close connection with neighboring disciplines. PUP1 thereby seeks to foster the students’ linguistic skills, multicultural competency, and flexible and critical thinking ability. PUP1 also seeks to contribute to the understanding and betterment of global society through interdisciplinary research.

“Human Resource Development Objectives”

PUP1’s “ideal graduate” is a well-educated individual who, equipped with “global competency” (including linguistic skills, flexible and critical thinking, and cross-cultural skills), can serve as a bridge between Japan and the rest of the world.

PUP2

At the same time as it increases students' facility with English, PUP2 also enhances the critical thinking skills of the students, and cultivates the skills necessary to study effectively at the university. Consequently, this is a very important introductory program to a liberal arts education.

Students read college-level articles on topics such as "Intercultural Communication" and "Bioethics", discuss and present ideas and opinions, and write papers on each topic. Through such academic activities, students learn to be critical, creative and independent thinkers in English. In addition, the intensive English learning environment prepares students to take liberal arts courses in English.

PUP3**Diploma Policy**

The university is committed to producing graduates who can use both the university's broad scope and their own individuality to make a pivotal contribution to global society. For this, they will benefit from the university's systematic educational framework, its university-wide academic environment, and its student-to-student relationships to develop an intimate relationship with multifaceted areas of study, culture, language and values. PUP3 seeks to nurture talented individuals capable of confronting global issues with sound judgment and from multi-faceted perspectives, so that they may become truly global citizens motivated to act on the world stage by a sense of justice, competitiveness, and humanity.

Curriculum Policy

PUP3 pursues a liberal arts education that emphasizes the fostering of logical thinking and multidimensional perspectives together with polishing fundamental learning through instruction in small classes.

Appendix 2: Interview participant list

Interviewee	Institution	Interview date	Interview style	Description of Interviewee role
1.	PUP3	March 17 th 2015	Face to face Individual	Program co-ordinator and author/ designer of CT course
2.	PUP3	April 7 th 2015	Face to face Individual	CT Course instructor
3.	PUP3	April 21 st 2015	Skype Individual	CT Course instructor
4.	PUP1	May 27 th 2015	Face to face Individual	Professor/ CT course instructor
5.	PUP3	June 26 th 2015	Face to face Individual	CT Course instructor
6.	PUP3	June 27 th 2015	Skype Individual	Program co-ordinator/ CT course instructor
7.	NUP1	October 21 st 2015	Face to face Individual	Professor/ CT course instructor
8.	NUP4*	November 4 th 2015	Skype Individual	Professor/ Cross cultural communication/ CT course instructor
9.	NUP1/ NUP2	November 22 nd 2015	Skype Individual	Professor/ CT course instructor
10.	PUP2	September 9 th 2016	Face to face Individual	CT course instructor
11.	PUP3	November 30 th 2016	Face to face Individual	Program co-ordinator/ CT course instructor
12.	PUP4*	March 29 th 2017	Face to face Individual	English program co-ordinator
13.	NUP3	May 20 th 2017	Face to face Individual	Professor/ Ethics course instructor
14.	PUP5*	May 21 st 2017	Face to face Group	Professor/ CT course instructor
15.	PUP6*	May 21 st 2017	Face to face Group	Professor/ CT course instructor
16.	PUP1	July 6 th 2017	Face to face Individual	Professor/ CT course instructor
17.	PUP7*	July 10 th 2017	Face to face Individual	Professor/ CT course instructor/ Author of CT textbook

Interviewees are identified by a number. The names of universities and programs (in which interviewees were employed) have been withheld and they are identified as NUP1 (National University Program 1), PUP1 (Private University Program 1) etcetera. Six programs (NUP1-3 and PUP 1-3) were also used for the critical discourse analysis in stage 1 of this research (chapter 5). An asterisk (*) indicates that instructors were from university programs outside of these six.

Appendix 3: Factor arrays and Z-scores for each statement

	Statement about critical thinkers	Factor 1	Factor 2	Factor 3	Factor 4
1	Try to question everything.	-1 -0.57	-3 < -1.46	-1 -0.66	-1 -0.43
2	Make logical arguments.	1 < 0.59	2 0.94	3 1.18	4 1.39 >
3	Take a negative attitude towards an issue.	-4 -1.82	-4 -2.03	-4 -1.96	-3 > -1.4
4	Try to test or challenge conventional wisdom.	0 -0.13	0 -0.23	1 0.4 >	0 0.25
5	Listen carefully to others.	4 1.62 >	1 0.54	1 0.35	0 0.49
6	Have specialized knowledge about a topic.	-2 -1.08	-3 < -1.27	-2 -0.87	-1 -0.44
7	Take a broad perspective and look at “the bigger picture”.	3 1.5	0 < -0.09	3 1.42	3 1.14
8	Ask the right questions.	-2 -0.97	-3 < -1.19	2 0.94 >	-2 -0.77
9	Don’t pass judgment immediately.	2 0.95	0 0.07	2 1.02	0 0.33
10	Have knowledge of global issues.	0 -0.12	-1 -0.52	-2 -0.67	-2 -0.81
11	Are creative thinkers.	0 0.03	-2 < -1.16	0 0.05	0 -0.02
12	Take a neutral attitude towards an issue.	1 0.45	1 0.68	-1 < -0.33	3 1.1 >
13	Overcome their cultural biases.	2 0.9	0 0.14	-1 -0.48	2 0.66
14	Understand multicultural perspectives.	3 1.21 >	1 0.41	0 < 0.13	2 0.72
15	Communicate their opinion effectively.	0 -0.08	1 0.77	0 0.29	-1 -0.32
16	Are sensitive to the emotions of others.	-3 -1.4	-1 -0.35 >	-3 -1.39	-4 < -1.91
17	Find ways to accommodate the opinions of others.	-1 -0.79	-2 -0.85	-3 < -1.26	-1 -0.18 >
18	Think from an ethical or moral position.	-1 -0.72	-1 -0.42	-1 -0.39	-1 -0.58
19	Take a positive attitude towards an issue.	-3 -1.16	-4 -2.03	-4 -1.9	-3 -1.05
20	Overcome their personal prejudices.	3 1.23	3 1.51 >	0 < 0.18	1 0.5

21	Evaluate the reliability of sources.	1 0.45	4 1.54	4 1.54	1 0.52
22	Have a flexible attitude towards an issue.	4 1.76 >	-1 < -0.48	1 0.52	3 1.09
23	Analyze how claims for truth are made.	-1 < -0.47	2 0.8	3 1.24 >	1 0.63
24	Do not necessarily have specialized knowledge about a topic.	-1 -0.38	-2 -0.89	-2 -1.00	-2 -0.76
25	Separate their thoughts from feelings and emotions.	1 0.69	2 0.86	-3 < -1.15	4 1.67 >
26	Synthesize new information with what they already know.	1 0.63	3 1.01	1 0.43	1 0.57
27	Reflect on their own thinking.	2 1.13 >	0 0.27	1 0.34	-4 < -2.37
28	Have persuasive writing and presentation skills	-2 < -1.02	0 0.39 >	0 -0.11	0 0.01
29	Challenge the opinions of others.	-3 < -1.21	1 0.6 >	0 -0.06	0 0.41
30	Evaluate information independently.	-4 -1.51	4 1.53 >	-1 -0.61	-3 < -1.91
31	Come up with new ways of thinking about a problem or issue.	0 0.3	-1 -0.29	2 0.67	1 0.52
32	Evaluate the logic of arguments.	0 < -0.01	3 1.2	4 2.13 >	2 0.97

Factors with a notable highest Z-score for certain statements highlighted in yellow.

Factors with a notable lowest Z-score for certain statements highlighted in blue.

Appendix 4: Q-sort factor loadings for 39 student participants

Q sort		Factor 1	Factor 2	Factor 3	Factor 4
1	O 1 F Phi.	-0.1201	-0.0432	0.6047 *	0.3826
2	O 2 F Vie.	0.2981	0.1062	0.6178 *	0.4206
3	O 3 F Phi.	-0.0518	-0.3065	0.4099	0.6844 *
4	O 4 F Tai.	0.0036	0.3846	0.6141 *	0.3746
5	O 5 F Mal.	0.1673	0.6647 *	0.1013	0.0821
6	O 6 F Kor.	0.7194 *	0.1366	0.4145	0.1616
7	O 7 F Chi.	0.4637	0.2962	0.4475	0.3581
8	O 8 F Chi.	0.1865	0.7159 *	0.3525	0.1857
9	O 9 F Swe.	0.2983	0.2212	0.4456 *	0.2799
10	O 10 F Jpn.	0.2076	0.6067 *	0.4233	0.2046
11	O 11 F Jpn.	0.574 *	0.085	0.4309	0.2889
12	O 12 F Jpn.	0.0798	0.2149	0.7406 *	0.0063
13	O 13 F Jpn.	0.0979	0.4792 *	0.0809	0.227
14	O 14 M Jpn.	0.5882 *	-0.0064	0.375	0.2844
15	O 15 M Aus.	0.3248	-0.059	0.523 *	-0.4127
16	O 16 M Kor.	0.3032	0.0597	0.5451 *	0.1448
17	O 17 M Kor.	0.2993	0.0896	0.7581 *	0.1159
18	S 1 M Jpn.	0.5472 *	-0.1864	-0.0452	0.1838
19	S 2 M Jpn.	0.0253	0.1334	0.2721	0.7161 *
20	S 3 F Chi.	0.6793 *	0.2275	-0.065	0.2223
21	S 4 M Jpn.	0.3852	0.0977	0.0743	0.4207 *
22	S 5 M Jpn.	0.4949 *	0.1329	0.2707	-0.0372
23	S 6 M Jpn.	0.5457	0.2413	-0.0022	0.6328 *
24	S 7 M Jpn.	0.3886	0.198	0.0994	0.6305 *
25	S 8 M Jpn.	0.3112	0.1165	0.1026	0.7325 *
26	S 9 F Jpn.	0.6465 *	-0.4087	0.2455	0.108
27	S 10 M Jpn.	0.7904 *	0.1426	0.1118	0.1157
28	S 11 M Jpn.	0.6847 *	0.0893	0.28	0.0268
29	S 12 M Jpn.	0.3113	-0.4622	-0.0505	0.3943 *
30	S 13 M Jpn.	0.1999	0.3028	0.1734	0.4998 *
31	S 14 M Jpn.	0.3802	-0.6091	0.4885 *	0.0378
32	S 15 F Chi.	0.2593	0.0907	0.1271	0.6787 *
33	S 16 F Jpn.	0.4565 *	-0.049	0.1238	0.3287
34	S 17 F Jpn.	0.6492 *	-0.0231	0.1743	0.1061
35	S 18 F Jpn.	0.49 *	0.1706	0.0718	0.2865
36	S 19 F Jpn.	0.5779 *	0.0547	0.1901	0.3741
37	S 20 F Jpn.	0.6931 *	0.0285	-0.0121	0.0397
38	S 21 F Jpn.	0.7069 *	0.1791	0.1133	0.3656
39	S 22 F Jpn.	0.6266 *	0.076	0.2288	0.0534
Variance		21%	8%	13%	13%

* Indicates factor loading (highlighted in 4 colours).

Nationalities:

Aus. - Australian

Chi. - Chinese

Jpn. - Japanese

Kor. - South Korean

Mal. - Malaysian

Phi. - Phillipines

Swe. - Swedish

Tai. - Taiwanese

Vie. - Vietnamese

Appendix 5: Information and consent document provided

interviewees participating in stage 2 of this research

Critical thinking and the Internationalization of University Education in Japan

Adam Gyenes,
PhD

candidate,

Graduate School of Human Sciences, Osaka University

Osaka University ethics approval reference number: 14069

You are invited to participate in an interview as part of my dissertation research study. Before you decide whether or not you wish to participate, I would like to explain why the research is being done, and what exactly it will involve. Please take some time to read the following information carefully.

As Japanese universities internationalize, critical thinking is frequently cited as a learning outcome of new programs and courses with an international focus. As an instructor, professor or program developer involved in a critical thinking course or program that emphasizes critical thinking skills, I would like to interview you and know your views on what it means to be a critical thinker, and issues around critical thinking education at Japanese universities. While papers have been written about critical thinking in Japanese education, it is my feeling that few researchers have looked at the actual teaching practices currently being used in universities, so it is my hope that this research can be a valuable addition to work conducted in this field.

In a semi-structured interview lasting approximately 20-30 minutes, you will be asked about what critical thinking means to you, your approach to teaching it, the courses you are involved in, and successes and challenges you have faced. Your participation is voluntary and you are free to withdraw from the interview at any time without giving reason. Respondents and their institutions will be written about anonymously and confidentiality is guaranteed in my dissertation paper. All audio data and interview transcripts will be stored securely and password protected. If you would be willing to participate, it would be greatly appreciated.

If you have any questions or concerns about the manner in which the study is being conducted, please contact me at adam@rku.ac.jp

Sincerely,
Adam Gyenes

CONSENT FORM

- I confirm that I have read and understand the information above and have had the opportunity to ask questions.
- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.
- I agree to take part in the above research study.

Name of Participant:

Signature:

Appendix 6: Information and consent document provided survey participants in stage 3 of this research

RESEARCH INFORMATION & CONSENT FORM

Critical thinking and the Internationalization of University Education in Japan

Adam Gyenes (PhD candidate),
Graduate School of Human Sciences,
Osaka University

Osaka University ethics approval reference number: 14069

You are invited to participate in a survey as part of my dissertation research study. Before you decide whether or not you wish to participate, it is important for you to understand why the research is being done, and what exactly it will involve. Please take some time to read the following information carefully.

As Japanese universities look to internationalize, critical thinking is frequently cited as a learning outcome of new programs and courses with an international focus. As students who have participated in a critical thinking course in an internationally focused program, I would like to survey you and find out what you think it means to be a critical thinker. While many papers have been written about critical thinking in Japanese education, few researchers have actually looked at the views of students, so it is my hope that this research can be a valuable addition to work conducted in this field.

In the survey, you will be presented with some statements about critical thinking on cards, and you will be asked to arrange these cards on a grid, depending on whether you agree or disagree with them. You will also be asked to provide some basic information such as your nationality, gender, and program of study. Your participation is voluntary and you are free to withdraw from the survey at any time without giving reason. Respondents and their institutions will be written about anonymously and confidentiality is guaranteed in my dissertation paper. Data will be stored securely and password protected. If you would be willing to participate, it would be greatly appreciated.

If you have any questions or concerns about the manner in which the study is being conducted, please contact me at adam@rku.ac.jp

Sincerely,
Adam Gyenes

CONSENT FORM

- I confirm that I have read and understand the information above and have had the opportunity to ask questions.
- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.
- I agree to take part in the above research study.

Name of Participant:

Signature:

Appendix 7: Codebook showing codes, categories, and themes used to analyse interview data in study two.

Themes are written in bold text and capitals. Categories are written in bold text. Codes were allocated numbers for reference while working at the initial coding stage. Code frequencies are indicated by numbers.

THEME 1: DEVELOPMENT OF OWN CRITICAL FACULTIES	
Acquired critical thinking through family upbringing	
131. Thinks discussion with family gave critical disposition	1
Acquired critical thinking through college experiences	
149. Came to know CT through study of intercultural communication	3
227. Learned CT through academic experiences	1
256. Own experience at university taught CT as a lifelong skill	1
281. Thinks studying law at university taught him CT	1
334. Developed CT through ed. not through home life	2
98. Describes CT in high school English & history classes	2
97. Describes experiences in college influencing own CT	4
72. Describes developing own CT disposition in college	1
Acquired critical thinking through life experiences	
176. Considers experience in business to have developed own CT	2
362. Overseas study influenced interest in CT	1
286. Thinks own CT shaped by travelling	1
Did not acquire CT through own education	
174. Claims didn't learn CT in university	1
175. Describes rote-learning in own educational background	1
THEME 2: DEFINING CRITICAL THINKING	
Questioning as part of critical thinking	

213. Wants Ss to challenge received ways of thinking	1
263. Thinks CT means to question everything	1
276. Encourages Ss to ask questions as much as possible	1
275. Thinks asking questions is the basis of CT	1
348. Describes CT as having a willingness to ask questions	1
346. Describes CT as an approach to questions	1
43. States that evidence needs to be verified through questions	2
38. Describes CT as not accepting conventional wisdom	3
7. States the importance of questioning	7
Rhetoric as part of critical thinking	
313. Thinks articulating position logically is important	1
212. Thinks Ss need CT to present arguments persuasively	2
211. Suggests CT is used for rhetorical purposes	1
Creativity as part of critical thinking	
173. Considers generating new ideas to be a CT process	1
181. Describes CT as creative and comparative thinking	1
35. Describes CT as creative.	1
26. Describes CT as productive skill	1
13. Views CT as positive	1
Logic as part of critical thinking	
209. Teaches students to identify logical fallacies.	1
310. Describes CT as logical analysis of an idea	1
29. Describes CT as testing hypotheses	1
24. Describes CT as separating logic from emotion	3
Perspective taking as part of critical thinking	
154. Aims for "de-centered" objective thinking	1
311. Thinks it is important to see different perspectives	3
22. Describes empathy as essential to CT	1
19. Describes perspective taking as essential to CT	2
Overcoming personal bias as part of critical thinking	
279. Thinks recognizing own prejudices is essential	1
18. Views overcoming personal bias as essential to CT	2

Flexibility as part of critical thinking	
302. Emphasises teaching open-mindedness and curiosity	1
14. Describes flexibility as part of CT	1
Emotion as part of critical thinking	
23. Views CT as including emotional thought	3
Reflection as part of critical thinking	
265. Thinks questioning own judgement is necessary for CT	1
95. Suggests CT is metacognitive	3
32. Describes CT as self-reflective	5
Evaluating evidence as part of critical thinking	
207. Defines CT as "analyzing how claims for truth are made"	2
210. Teaches Ss to analyze discourse	1
226. Wants Ss to learn to challenge opinion pres. as fact	1
233. Suggests CT = making judgments with imperfect knowledge	2
264. Defines CT. as evaluating information to form judgement	1
128. Defines CT as reading between the lines	2
127. Views CT as evaluating the strength of arguments	1
42. States the importance of evidence to support CT	3
Problem-solving as part of critical thinking	
8. Describes CT as problem solving skill	1
Synthesis as part of critical thinking	
312. Ss need to synthesize ideas with own beliefs/ background	1
96. Suggests importance of synthesis with prior knowledge	1
Views on defining CT	
148. Defines CT as very broad concept	1
170. Avoids verbally defining CT	1
225. Has misgivings about using textbook definitions of CT	2
224. Finds common elements to variety of CT definitions	1
262. Thinks CT definition is easy to explain	1
345. Expresses difficulty in defining CT to a student	2
4. Describes commonalities in definitions	1
THEME 3: BELIEFS AND APPROACHES TO TEACHING CRITICALTHINKING	

Assessment of critical thinking skills	
143. Thinks written assignments need to incorporate CT	1
201. Considers evaluating CT in an essay challenging	1
235. assesses course with an essay	1
241. Suggests difficult to show measurable improvement	1
270. Thinks CT is very difficult to measure or gauge	3
314. Considers effective use of CT skills difficult to evaluate	2
315. Thinks learning process too abstract to give Ss feedback	1
64. Describes wanting to measure CT ability	1
15. Thinks EMI encourages more CT focus in assessment criteria	1
Using controversial topics / materials in class	
178. Became interested in ethical issues through teaching	1
177. Describes own interest in CT related to ethical dilemmas	1
198. Thinks Ss respond positively to controversial topics	4
318. Approaches controversial topics from familiar start point	1
Selecting / writing teaching materials	
180. Uses business literature to teach CT	1
179. Developed CT course content around bioethics content	1
321. Tries to write materials in a balanced way	1
320. Chooses materials based on awareness of Ss cult. biases	2
319. Presents opposing opinions on a topic	1
Problems with available teaching and assessment materials	
273. Finds appropriate materials to teach CT to L2 ss hard to find	1
272. Found American JHS CT text too basic	1
271. Thinks CT teaching materials are too Eurocentric	1
288. Thinks course materials assume Ss can't think critically	1
306. Dissatisfied with provided course materials	1
352. Thinks Ss find CT textbooks boring	1
65. Describes available CT tests as too culture specific.	3
The role of the teacher in a CT class	
332. Wants to create environment where dif. way of com. is normalized	1
34. Views teacher's role as creating open environment	1

105. Thinks teacher needs to take a step back	1
90. Views teacher as facilitator or coach	1
89. Views the role of a teacher as a guide or advisor	1
Teaching CT through content / themes	
360. Considers CT suited to content class teaching	1
339. Describes CT course as overlapping skills and content	1
349. Considers reading and writing necessary for course	1
351. Aims for thematic unity with readings from dif. discipline	1
74. Thinks CT and liberal arts fit together	1
86. Suggests CT class should begin from input (e.g. article)	2
75. Courses effective if organized thematically	1
Teaching CT as a process learned through experience	
155. teaches CT skills indirectly	1
165. Shows students CT rather than explains it	2
166. Makes analogy of CT and swimming- immersion	2
172. Thinks class teaches students analytical tools	1
234. Moves from problematic to nuanced texts to raise challenge	1
316. Thinks iterative teaching process may be effective	1
85. Suggests activities need to be scaffolded	5
130. Thinks students improve through practice	1
129. Believes students need structured approach to analysis	1
30. Claims teachers need to teach the process	3
Use of literary texts to teach critical thinking	
340. Likes to use literary texts to teach CT course	1
102. Emphasises importance of cultural literacy in fiction	2
100. Thinks combination of fiction/ non-fiction is effective	1
76. Describes opposition to using fiction in CT courses	1
44. Compares short stories to articles for teaching CT	1
41. Suggests value of using fiction in CT courses	6
Links between CT and language teaching approaches	
66. Considers CT easier with familiar topics	1
50. Views students as vocabulary resource.	1

46. Describes CLIL as effective approach	1
27. Makes analogy between learning CT and languages	1
Ambiguity about best teaching practices	
359. Thinks different teachers have different approaches	1
81. Thinks teachers struggle to teach the course	1
25. Claims teachers teach critical reading, not CT	1
20. Describes lack of clarity about ways to teach CT	1
Instructor's subjectivity	
229. Thinks different teaching approaches come from background	1
228. Own teaching emphasis stems from own academic interest	1
341. Instructors should be able to choose own readings	1
342. Thinks different CT instructors teach with dif. emphasis	1
CT as a practical life skill	
277. Has been criticized by others for not teaching more theory	1
231. Wants to emphasise CT as a general life skill	1
278. Thinks messy thinking is dangerous	1
280. Thinks CT helps people make better life decisions	1
309. Teaches CT not in an explicit way	1
347. Describes CT as useful for job hunting	1
9. Describes CT as a guide to belief	1
5. Describes CT as a practical skill	3
CT as an academic skill	
297. Questions whether Ss see CT as class skill or life skill	1
230. Thinks CT is essential to academic skills	1
CT is learnable	
171. Considers learning through experience important.	2
204. Thinks J. Ss perform well at CT given right circumstances	1
28. Views CT as improving through practice	4
331. Thinks Ss can learn CT- just need training and practice	1
49. Views student performance positively	1
3. claims anyone could be a critical thinker	1
THEME 4: OBSTACLES, EFFECTIVE STRATEGIES AND COURSE OUTCOMES	

Positive outcomes of critical thinking courses	
158. Thinks students learn to recognize stereotypes	1
239. Ss more likely to question conventional wisdom	2
243. Course helps Ss communicate ideas in speaking and writing	1
242. Thinks course helps Ss develop intellectual autonomy	1
244. Ss feel course helps them get research skills	1
274. Ss feel course challenges them and are motivated	1
326. Describes improvement in discussions skills over semester	1
338. Course helps Ss deal with difficult texts	1
356. Ss. find course demanding but valuable	1
357. Course improves writing	1
99. Describes being interested in teaching CT course	1
118. Thinks Ss improves ability to critically analyze articles	1
110. Suggests course improves discussion skills	1
109. Thinks Ss improve inferencing from course	2
84. Thinks course is effective to improve CT skills	2
Views on course length, structure & effectiveness	
156. States course is 1 semester in length (15 weeks)	1
365. feels there is lack of coherence across the curriculum	1
164. Describes average student numbers	2
163. Describes extracurricular nature of course	1
216. Suggests limited impact of CT classes	1
214. Feels institutional framework constrains CT education	2
220. Teaching approach depends on class size	1
237. Thinks one semester too short	1
240. Thinks short course limits assessment options	1
247. Describes difficulties with expanding the course	1
258. Thinks teaching CT achievable with longer time	1
257. Doubts impact of short course in CT for a lifelong skill	1
285. Thinks workload too heavy to focus on thinking skills	2
336. Thinks it would be good to integrate content across course	2
335. Thinks unified curriculum is needed	1

337. Thinks impact of class limited by contact with Ss	1
106. Suggests CT is difficult to teach in large classes	1
114. Suggests a more intensive course would be effective	1
113. Thinks course is too short to develop skills fully	1
Views on marketing of CT in program	
151. Describes using CT in course name as understandable	1
253. Thinks course serves to advocate phil. of the degree program	1
301. Embraces uni. ethos of focus on CT	1
Ineffective class activities	
361. Thinks many English textbook CT exercise are not really CT	1
363. Thinks formal logic is not suited to teaching situation	1
146. Distinguishes reading about thinking skills from CT course	1
183. Thinks phil. study of ethics difficult for L2 learners	1
182. Avoids using definitions or terminology for thinking	1
353. Avoids teaching lists of logical fallacies	1
Effective class activities	
169. Gives example of deconstruct, reflect reconstruct exercise	1
168. Uses brainstorming activities to generate ideas.	1
167. Sees stakeholder analysis as starting point for CT	1
192. Uses majority of class time for discussion	1
191. Uses short lectures in class	1
190. Assigns readings outside of class	1
189. Asks students to research topics online	1
188. Uses videos in class	1
187. Uses variety of media to give students topic facts	1
186. Keeps lecturing to a minimum in class	1
185. Uses emotion vs. intellect ethical dilemmas to teach CT	1
184. Describes case study based learning	3
197. Uses surveys in class	1
223. Uses advertising to introduce the concept of CT	1
282. Exemplifies CT through telling Ss false information	1
325. Uses peer feedback to raise awareness of skills performance	1

354. Discussion leads to improved skill of listening to others	1
126. Asks students to define CT in class	1
92. Gives examples of activities that encourage reflection	1
88. Considers written output to be necessary.	1
87. Suggests beginning with comprehension.	1
Effect of group learning	
196. Describes synthesis of ideas through group work in class	1
195. Considers group brainstorming effective	1
194. Considers seat arrangement to facilitate discussion	1
193. Thinks 6-8 students is a ideal number for group discussions	1
248. Suggests CT taught in tutorials by grad Ss. in west	2
252. Thinks course offers a space for Ss to interact socially	1
350. Describes small class size as ideal to facilitate discussion	1
355. Group discussion opens students to blind spots in thought	2
47. Considers small groups to be ideal classes	4
17. Views group learning as effective to develop CT	5
Development of a CT disposition	
238. Describes Ss changing ideology through effect of class	1
255. Thinks teaching people to think critically is very difficult	2
260. Considers uni. Ss too young to become critical thinkers	1
261. Thinks Critical attitude is difficult to teach	1
299. Describes S. changed life view on gender through CT class	1
298. Thinks CT is subversive, and only elites are educated in	1
300. Describes changing student's outlook as rare	1
6. Describes CT as a disposition	3
Use of critical thinking skills outside of course	
246. Thinks Ss have no chances to develop CT in other courses	1
259. Thinks lessons have little long-term impact	1
328. Thinks Ss don't use outside of own class	1
327. Wonders if Ss apply skills outside class	1
Links between CT and cross-cultural communication	
150. Considers 'critical cultural awareness' important to IR	1

141. Thinks use of English as Lingua Franca promotes CT	2
153. Describes "de-centering" as part of cultural awareness	1
77. Suggests Ss struggle to use CT without cultural knowledge	4
73. Describes cross-cultural learning as developing own CT disposition	1
62. Describes study abroad as psychologically valuable	1
40. Describes cross cultural as chance to learn own culture	1
39. Considers CT essential to cross cultural communication	4
Overcoming deference to the teacher	
251. Culture of challenging teacher is challenge to J. students	1
284. Thinks Ss need to overcome fear of asking Qs	1
283. Ss reluctant to question teacher to avoid upsetting them	1
57. Describes image of CT instructor like Michael Sandell	1
56. Describes expectation that CT instructor is like ted talk	1
121. Feels students think the teacher has the right answer.	1
120. Suggests students reluctant to challenge teacher	1
119. Suggests students defer to the teacher	2
91. Considers use of CT independently of others important	2
33. Thinks student's ideas are as valid as teachers	2
Necessity of subject specific knowledge	
208. Suggests Ss struggle to evaluate evidence without subject specific knowledge	1
322. As lang. teacher, approaches topics without specif. knowledge	1
71. Questions whether world knowledge is needed	1
45. Considers CT capacity to be discipline dependent	3
Challenge of combining critical thinking with language learning	
358. Questions who should teach CT.	1
269. Thinks Ss may be using CT but unable to express in English	1
268. Thinks expecting Ss to use CT in L2 is too much	2
303. Thinks Ss need more English language support	1
317. Thinks for L2 learners, topics need to be somewhat familiar	1
324. Describes CT as secondary goal in writing class	1
323. Describes CT as secondary goal to fluency in course	2

117. Thinks there are 2 levels to operate at- ling. and cog.	1
112. Suggests students struggle to discuss without prep.	1
111. Suggests Ss struggle to listen and respond spontaneously	1
104. Considers English writing to be more explicit than Japanes	1
94. Suggests doing CT in English not J. is more challenging	4
93. Suggests language can cause difficulty for students	1
79. Suggests higher English level students enjoy the course	2
78. Suggests intermediate English level Ss struggle	2
Diversity of cultures / nationalities in class	
147. Mixes Japanese and international Ss in class is important	2
152. Says unis want courses that J. and int. Ss can study together	1
157. Thinks int. students encourage J. Ss to speak out more	1
160. Describes western students as naturally critical	1
205. Considers presence of foreign Ss helps J. Ss	1
222. Suggest int. Ss have advantage in class	1
249. Suggests J students educ. overseas don't identify as J.	1
250. Estimates only 20% of Ss are Japanese in course	1
254. Course used to offer support for int. students to adjust	1
344. Describes some Ss in class as Japanese by passport only	1
123. Feels stimulated by classes with a range of nationalities	1
122. Feels cultural diversity in class helps perspective taking	4
Diversity of academic backgrounds in class	
48. Views diversity of academic backgrounds as helpful to CT	5
THEME 5: STUDENT MOTIVATION TO STUDY CRITICALTHINKING	
Students who are motivated to improve their English skills	
203. Describes Ss who are motivated to improve English	1
218. Thinks Ss sign up to improve writing skills	1
124. Thinks Ss expect an English course	1
115. Suggests CT is marketed to students as English course	1
83. Suggests students sign up for course to improve English	4
53. Describes students motivated to improve English	3
52. Thinks students see language learning as benefit of course	1

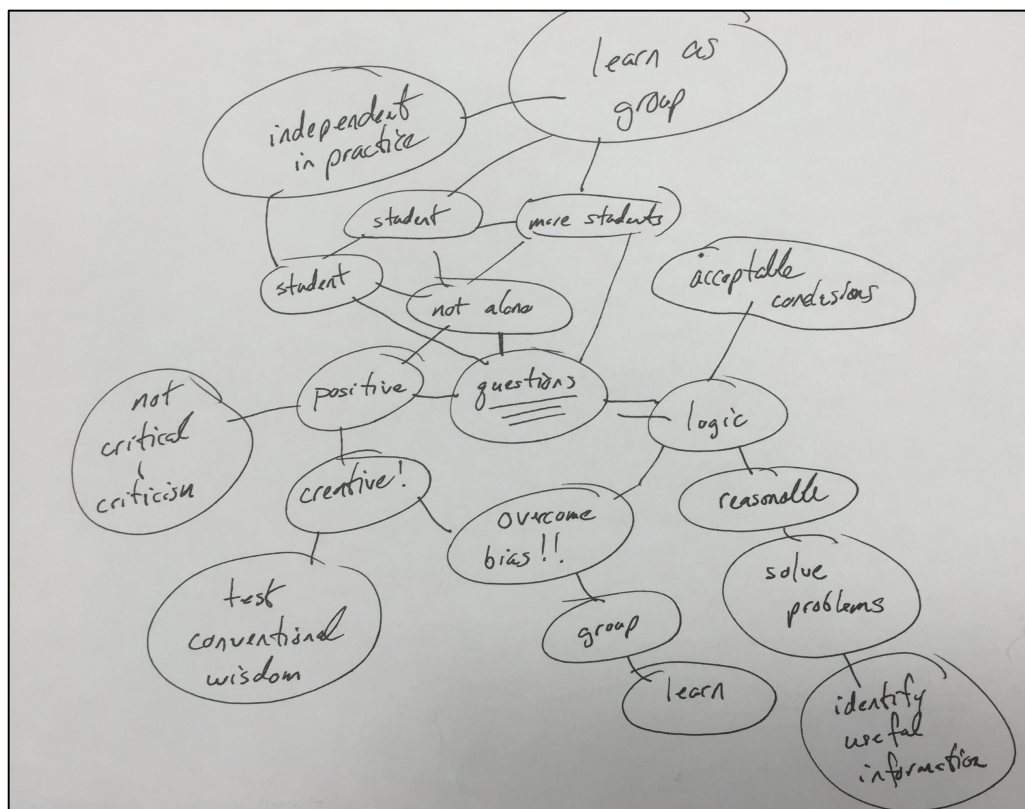
51. Describes language learning benefits of CT course	1
Students who are motivated to improve thinking skills	
219. Thinks some Ss sign up to improve thinking skills	1
232. Thinks Ss are motivated to learn CT as life-skill not academic	1
63. Describes course as meeting student needs	1
55. Thinks students are glad it is not an English course	2
54. Describes students as motivated to improve thinking skills	1
De-motivating factors for students	
199. Says some Ss find topics dark	1
305. Thinks less intensive demanding course would help Ss	1
308. Thinks workload affects student motivation	2
101. Talks about mixed levels of motivation in class	1
107. Describes assessment tasks as de-motivational	1
Course popularity	
200. Finds it useful to ask students to evaluate course	1
217. Thinks course is popular as an elective	1
Difficulties faced by Japanese students in CT class	
343. Draws analogy between Ss weak English and J. acculturation	1
70. Describes lack of debate in family obstacle to disposition	1
69. Questions whether Japanese students have disposition for CT	1
61. Describes difficulty Japanese students have with discussion	1
59. Describes Chinese students as more rhetorical	1
60. Claims Japanese students are not encouraged to speculate	1
58. Describes Chinese students as more independent	1
31. Claims students lack confidence in their thinking skills	1
Students lack of knowledge or experience of critical thinking	
145. Suggests Ss need to understand goal of a CT course	1
221. Thinks majority of Ss have no exp. of CT class activities	2
82. Thinks Ss have little idea of meaning of CT.	1
80. Thinks students don't know what to expect in the course	1
The validity of teaching critical thinking in English	
304. Might benefit Ss to have lectures in J. on same topics	1

125. Thinks students should learn CT in their native language	1
116. Questions the validity of teaching CT in English	3
Students who are motivated by topics	
202. Describes some Ss who are motivated to investigate topics	1
307. Thinks thematic materials more stimulating than ESL texts	1
THEME 6: CRITICAL THINKING AND JAPANESE SOCIETY	
Usefulness of CT in Japanese society	
161. Thinks teaching CT may not help Ss get along in J. society	1
266. Thinks questioning everything goes against J. culture	2
287. Thinks in Japan CT is not done in public- privately	1
290. Suggests Japan has done well even without CT focus in ed.	1
289. Thinks CT focused degree programs in J. modelled on US college	1
296. Thinks teaching J Ss can alienate them from own culture	1
295. Thinks asking Ss to question goes against their culture	1
67. Questions whether CT is necessary in Japanese society.	1
Problems with Japanese education that hinder CT	
364. Describes lack of choice in Japanese education	1
144. Thinks exam focus in J. ed. hinders CT	1
142. Thinks business education in Japan promotes CT	1
159. Describes Asian ed. as focused on rote learning.	1
162. Feels Japanese students have little prior knowledge of CT.	2
267. Thinks CT goes against prior ed. experience of J. Ss.	1
333. Compares rote learning in Jap. with own exp.as lit student	1
68. Thinks CT education should start in school	1
108. Believes Ss had less experience of similar class structure	2
103. Feels inference skill is not used in English learning	1
Stereotypical views of Japanese students	
137. Critiques western view of Asia influenced by Confucianism	1
37. Describes stereotype of Japanese students as uncritical	1
2. claims that to stereotype Japanese students is uncritical	1
1. critiques stereotype of Japanese as uncritical	2
Separating Western and Eastern thought	

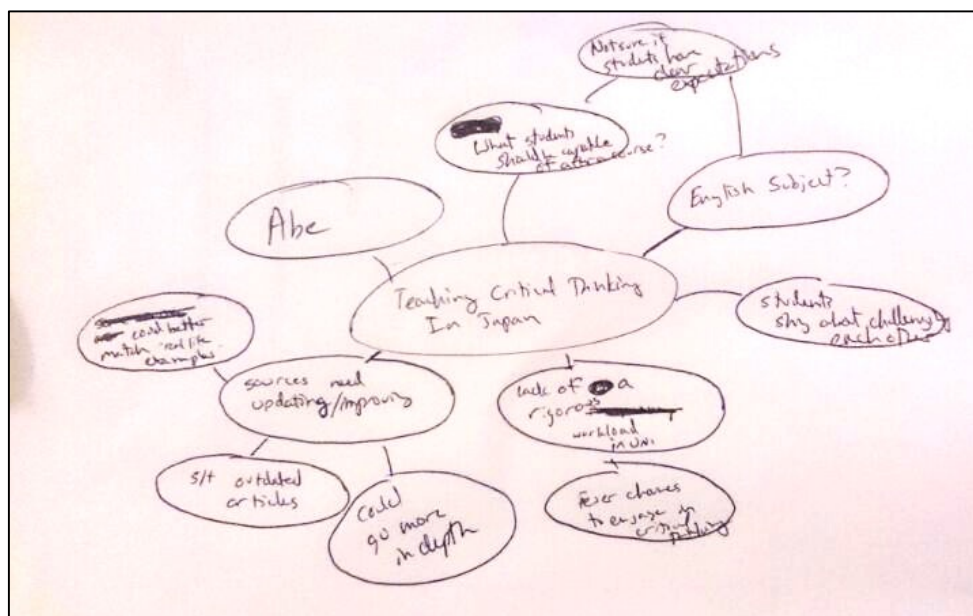
21. Claims distinction of Japanese and Western thinking is fals	2
140. Critiques Nihonjinron	1
139. Thinks western and eastern thinking need to be integrated	1
138. critiques distinction of Western and Eastern thinking	1
Misunderstanding of critical thinking in Japan	
134. Questions whether EMI is just English education	1
133. Construes internationalization discourse with English ed.	1
135. Considers CT to be widely misunderstood	3
136. Believes administrators don't understand CT	1
215. Describes a lack of understanding of CT in uni admin.	1
236. Thinks CT is just conflated with English education	1
245. Thinks CT gets lots of lip service but not valued	1
330. Thinks CT has negative connotation in Japanese	2
329. Thinks CT not well known in Japan	1
132. Calls CT a buzzword	1
36. Describes misunderstanding of CT not being creative	1
12. Describes view of CT as negative/ cynical as wrong	1
11. Describes misunderstanding of CT being based on Logic	3
10. Describes CT being rejected as a western construct	5
Japanese characteristics that display critical thinking	
294. Thinks Japanese culture has different kind of CT	1
293. Thinks in west, Ss encouraged to pick one side to argue fo	1
292. Thinks withholding judgement is Japanese CT trait	1
291. Thinks J. value of harmony is a version of CT	1
16. Expresses view that Japanese try to accommodate opinions	1
Japanese characteristics that hinder critical thinking	
206. Thinks J. Ss hesitate to express ideas to each other	1

Appendix 8: Mind-maps collected from interviewees in study two.

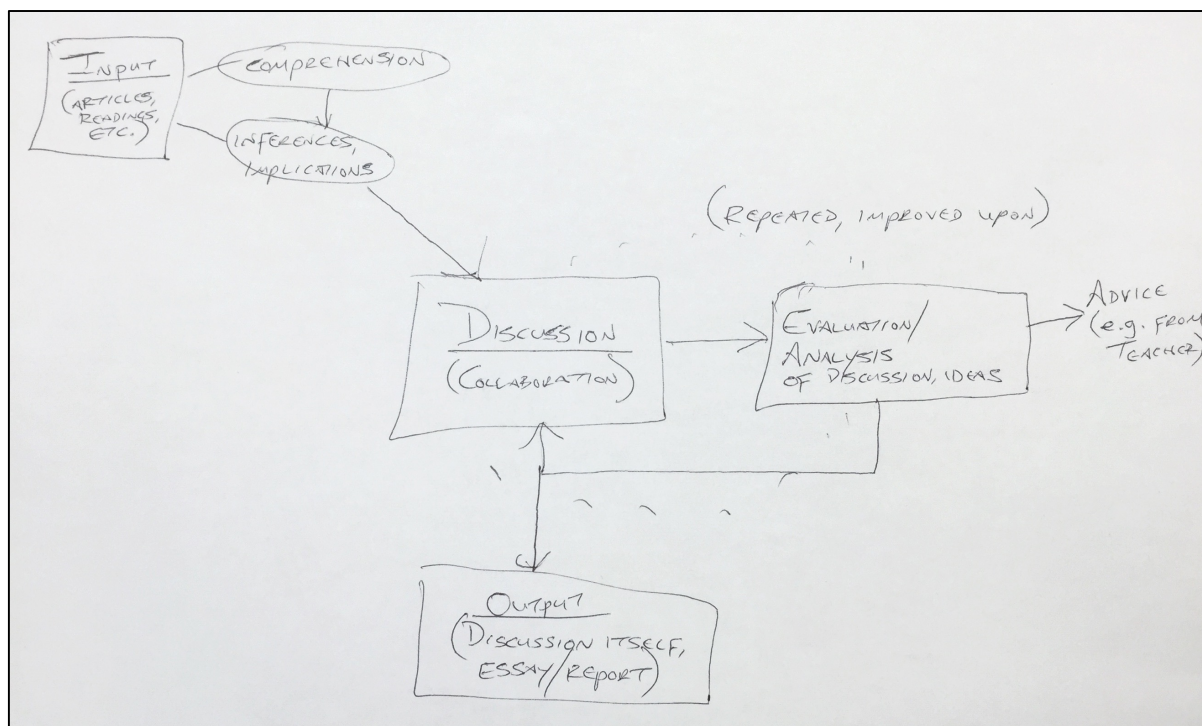
Interviewee 1



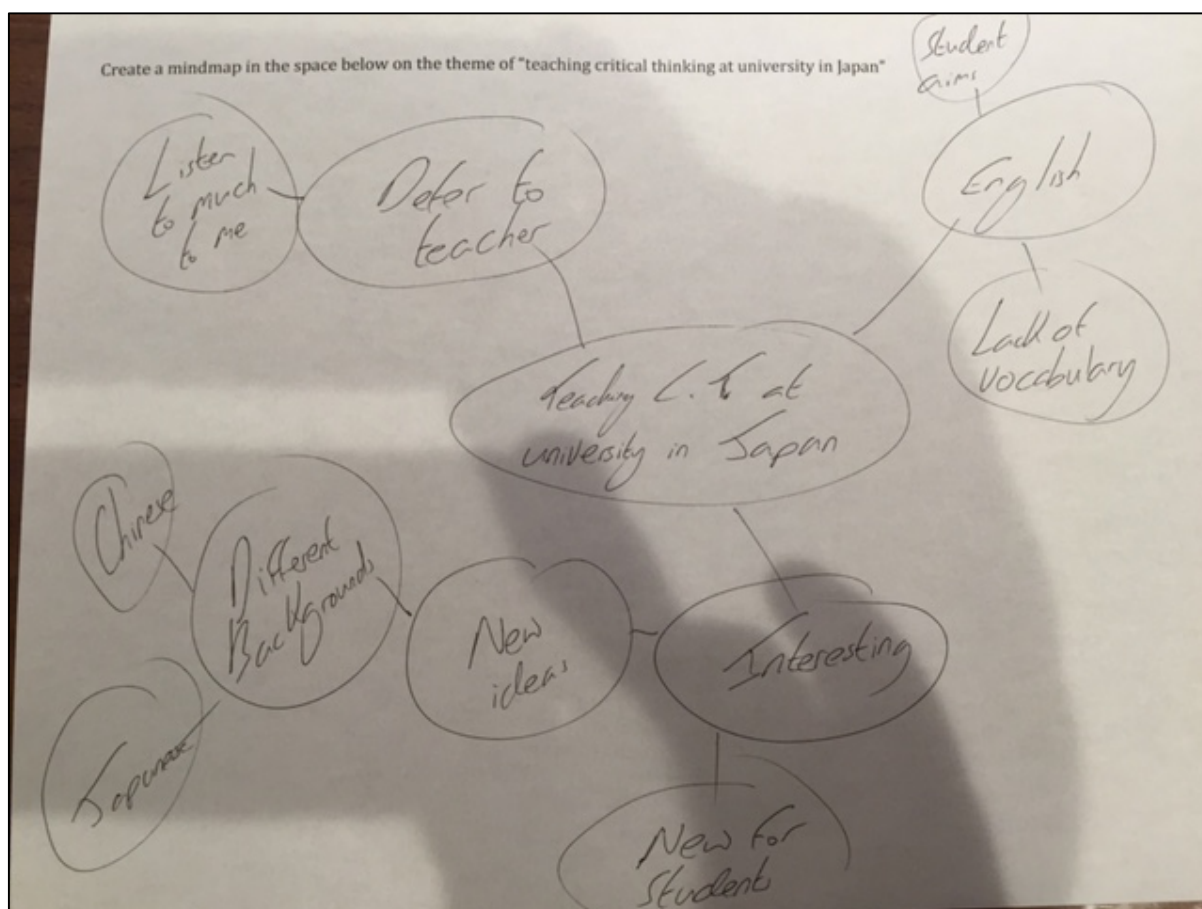
Interviewee 2



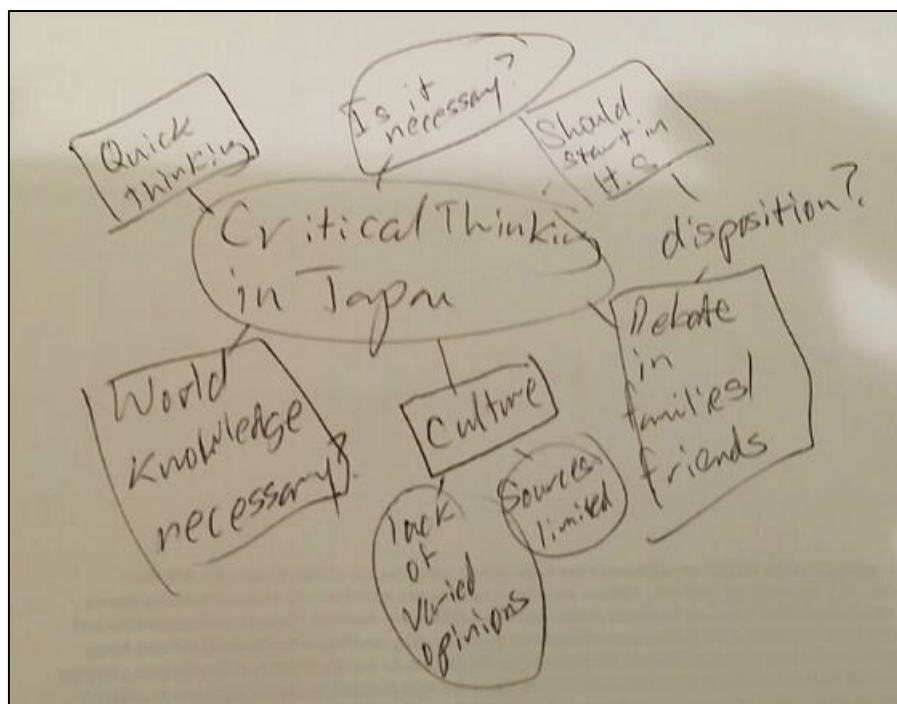
Interviewee 3



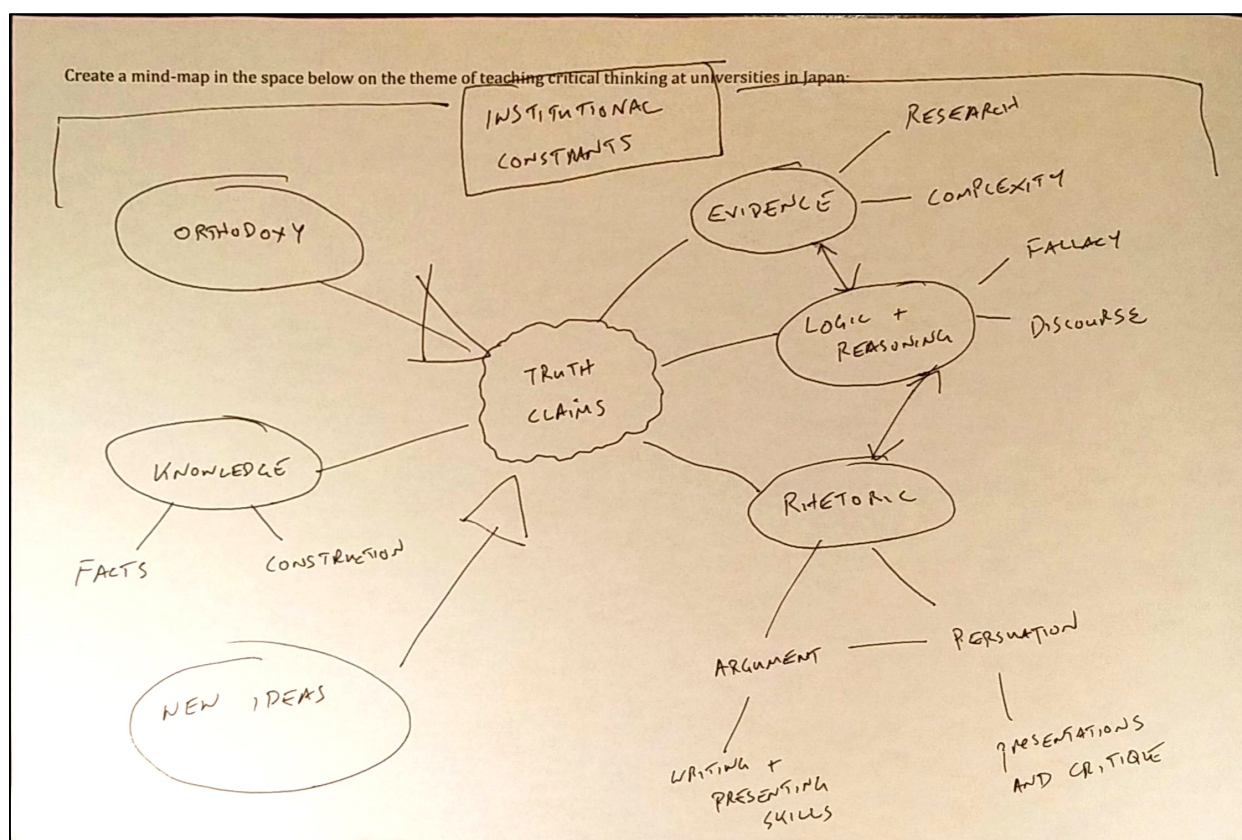
Interviewee 4



Interviewee 6



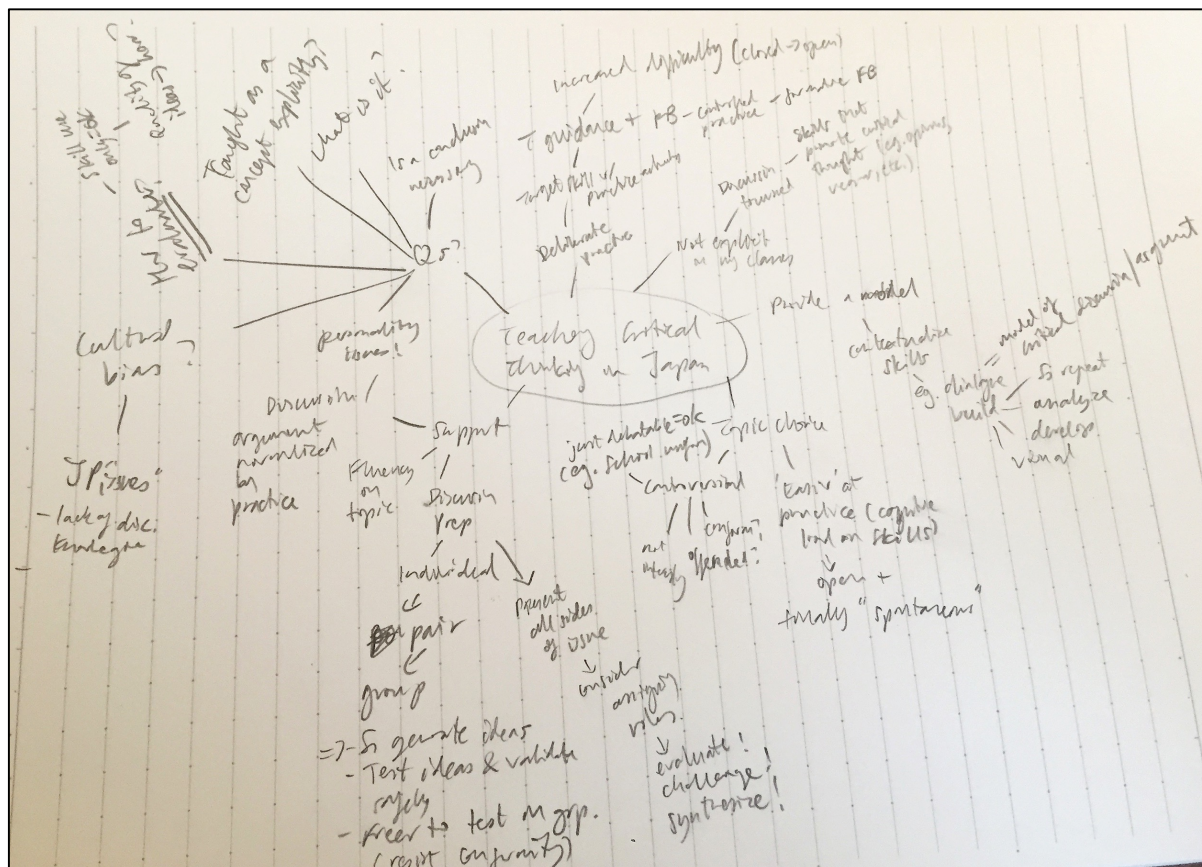
Interviewee 7



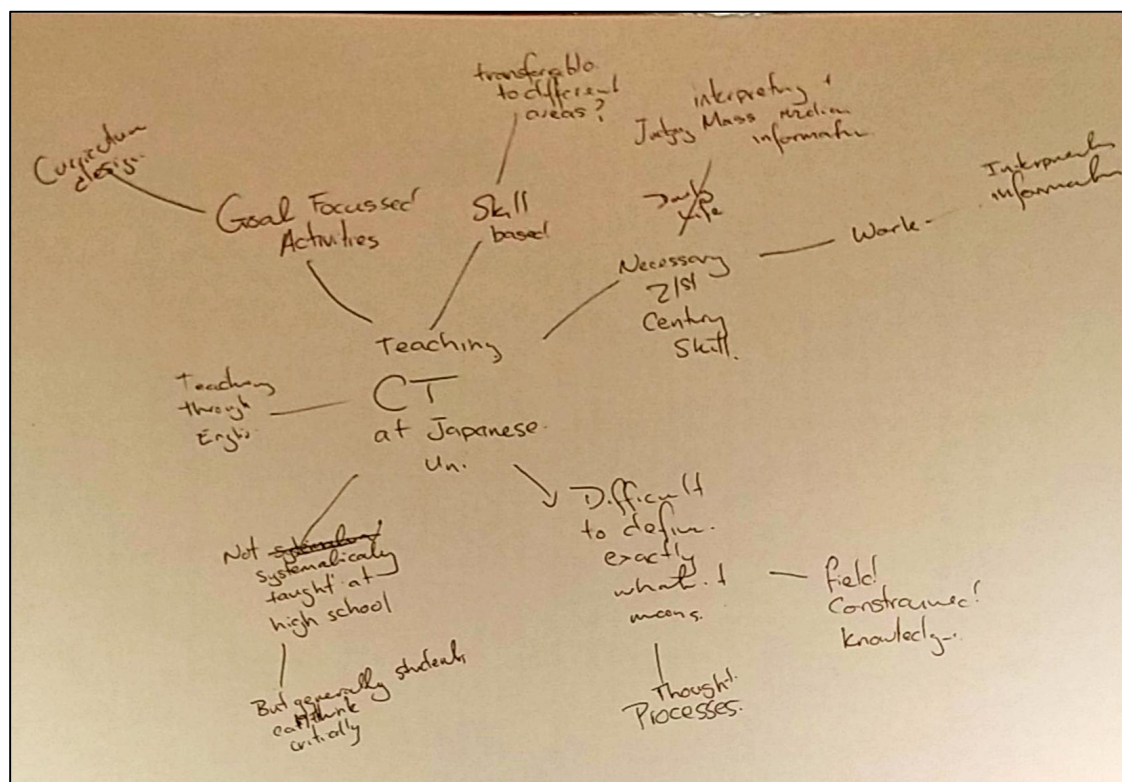
Interviewee 10



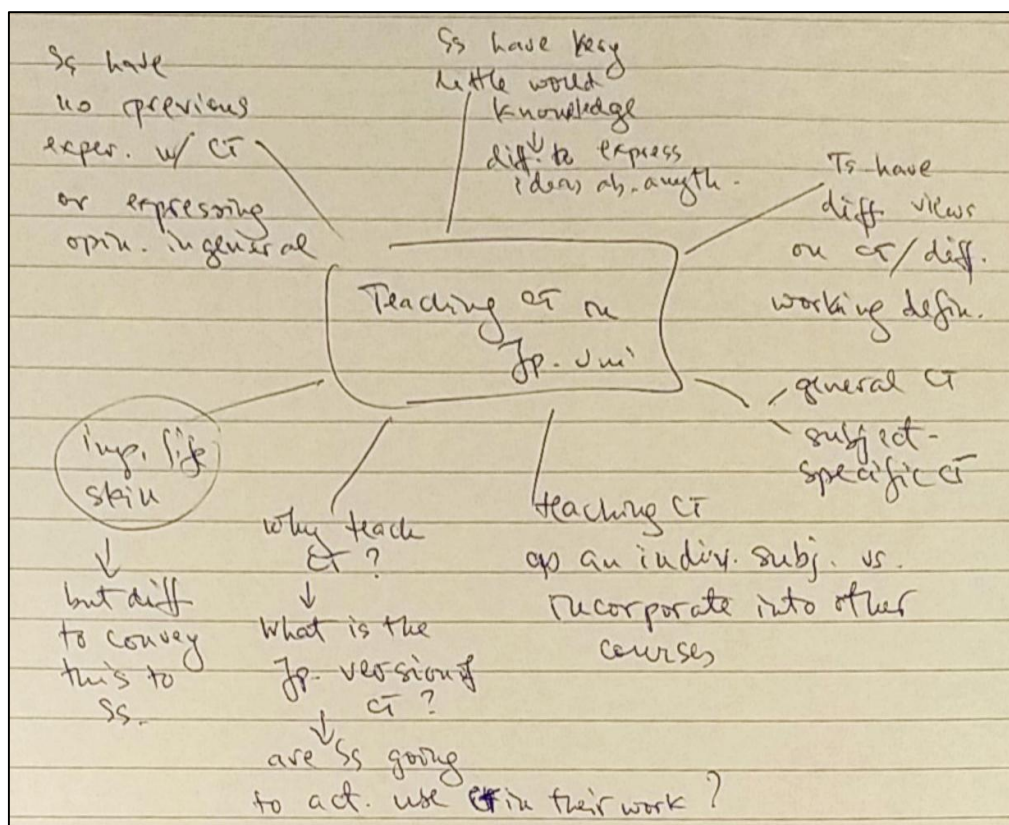
Interviewee 11



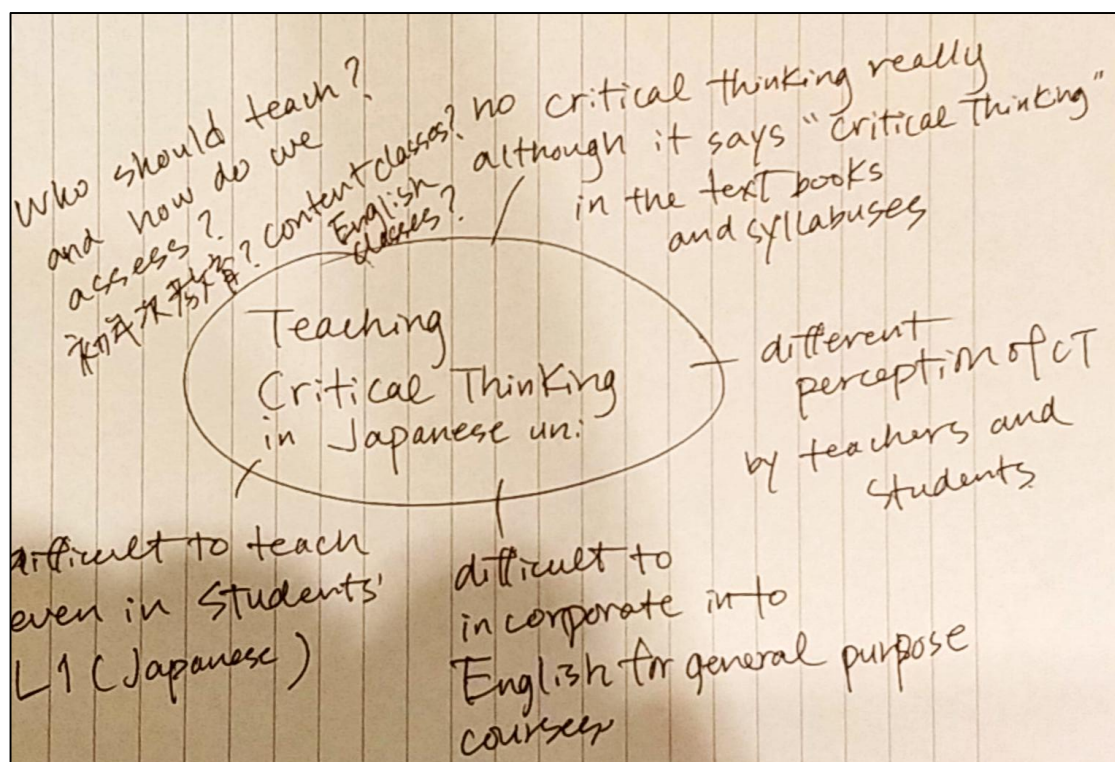
Interviewee 12



Interviewee 14



Interviewee 15



Interviewee 17

