Studies in Second Language Acquisition

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# Chapter 1

### 1.1 Introduction

Second language development can be a bi-product of students undertaking a course in critical thinking, whereby learners are tasked to work together to solve problems in a language that isn’t their own. By doing this, it becomes a challenge for the students to harness all the resources at their disposal and deliver a solution. When this happens, students become more focused on the problem and forget that they are learning another language at the same time.

Internationally, critical thinking is now one of the most recognised skills to generate forward momentum. Many countries, such as Australia (Australian Curriculum Assessment and Reporting Authority, 2020), have already moved in the areas of critical and creative thinking, building skills into future generations. However, a lot of other countries where English is still a second language are yet to come up with working models that have the capacity of changing the education system, and by that, I mean changing a test-based system that examines memory and is very often rooted in existing understandings only.

Dr. Laura Jana M.D. refers to critical thinking as a Qi skill and suggests that along with other soft skills they can be developed a lot earlier than most people realise. She posed the question, “should we try to develop skills in children, creative and innovative minds that are capable of learning throughout life?” The answer to this question is an astounding, Yes! (Jana, 2018) .

Every institution needs to plan for the long term and to do this a tree needs to cultivate its roots. Once critical thinking, and other vital skills are developed in youth they can be carried forward to adulthood. It is from this pool, that institutions can source leaders who have the capacity to think at a higher level and make the best decisions possible for strategic forward progression in a changing environment.

Is it therefore possible to pivot a language development course, one that is heavy on memorizing vocabulary to a course in the creation of higher order thinking skills? This research will investigate the opportunity and put a plan in place to see the realization of the findings.

### 1.2 Needs Analysis

Critical thinking (Saxtona, Belanger, and Becker, 2012) has been added to classrooms before, although more work still needs to be doe to prove validity. Pei, Zheng, Zhang & Liu (2017) presented a simplified writing rubric (Appendix A) that may one day be scalable, though on the other extreme, the simple nature of this research suggests that more could be done.

My own successful critical thinking exploratory study proved that critical thinking skills could be generated in L2 junior high school students where the language used to present the information was English. This thesis will weigh heavily in the continued research of second language acquisition (SLA), because now more than ever the new students coming through the higher education system are better informed than ever before and expect more from institutions than being able to recall information for exam purposes.

My previous thesis (exploratory study) was able to develop both an easily understandable teaching rubric and a strong higher order thinking pedagogy that enabled students to extend on their initial higher order thinking skills on average by approximately 8.43 points. In light of the above studies and my thesis therefore, additional research needs to be expanded into a university setting, involving more teachers and increasing the sample size towards proving validity and expanding SLA to be more then language learning.

Currently, there is no common critical thinking curriculum being formally taught in L2 education, so the starting point should be with teachers. Despite how a teacher may have learnt in the past, they need to train future learners to think critically by innovating their teaching methods, introducing teaching activities that empower students to question, analyze, discuss and solve problems. Using writing as the vehicle of instruction, teachers will need to assist students with tools that develop skills in the areas of - synthesis and analysis, problem solving, application of theory, differentiating the significant from the unimportant, understanding rhetorical conditions, using a breadth of available resources, and instilling confidence in oral and written communication (Williams, Nelson, McLeod, Meyer, Cameron, & Wangberg, 2003). Essentially, these areas will become the building blocks of cognitive development.

This assignment will focus on trainee teachers in the L2 population of Wenzao Ursuline University in Taiwan. To achieve this, the research will link writing to critical thinking in a blended learning space, and will be added to the students’ learning as a separate course offering.

### 1.3 The Study Population

In a university with a reputation for producing students who graduate with a high level of English, a course that enables pupils to develop their cognitive abilities is one that needs to be treated as an opportunity. Add to this, the possibility of drawing on some of the great minds that make up the Wenzao Ursuline University of scholars and the program has the capacity to grow even more.

### 1.4 Opportunity

In many Asian countries, the skills acquired still fall short of the necessary requirements for overseas study. This is something that is evident when ELS students study in a western country, where critical thinking and the ability to express original ideas is integrated more into the tertiary curriculum (Ravichandran, Kretovics, Kirby & Ghosh, 2017).

Research in this area is timely, as the second study outlines above, established a deficiency in the critical thinking skills of students in L2 environments (Pei, Zheng, Zhang & Liu, 2017). It found that there are extremely concerning deficiencies in Chinese students’ ability to think critically.

### 1.6 Research Objectives and Significance

My future research objectives are listed as follows:

* To push for a complementary higher order critical thinking subject to be added to existing curriculums.
* To build on the published work of (Pei, Zheng, Zhang & Liu, 2017) and my 2020 thesis that established that critical thinking could be taught to L2 junior high school students through persuasive writing.
* I hope that more teachers will move their focus away from memory, grammar-based and theoretical instruction to challenge students to think more.
* From a personal perspective, I want to let the next generation imagine and seek out the world that is to come, rather than accepting the one that has been prepared for them. This means, being evaluated for one's thinking rather than for one's mastery, especially when building a second language at the same time.

### 1.7 Significance of this study

* Should the ideas presented gain traction, the critical thinking rubric has the capacity to be used as an influential building block in the continued study of both how students gain higher order thinking skills, and the teaching techniques used to develop them.
* Assuming that the above point is true, this teaching will have long term consequences on emerging curriculum development.

Based on these research objectives, the research questions are as follows:

### 1.8 Research Questions and Hypothesis

(a) How can the critical thinking course assist second language acquisition?

(b) How does student thinking and language change as a result of undertaking a critical thinking course?

(c) In terms of current student and parental expectations, how is a course in critical thinking more marketable than second language acquisition?

# Chapter 2: Literature Review

Sociocultural Theory, will be the theory that holds the ideas of this thesis together, before addressing each of its components.

### 2.1 Sociocultural theory

Sociocultural Theory builds cognitive development (Zubaidi, 2015), and is based on social interaction (Lim, 2007; Muller, 2017), especially when interacting beyond current capabilities. In today’s world this base of knowledge can also be extended to one’s interaction with the Internet, with the zone of proximal development suggesting that when knowledge is slightly beyond an individual’s current level, learning will more than likely take place (Zubaidi, 2015). The Internet is an important component here as society, the market base of many institutions, moves progressively towards self-education.

The learner develops critical thinking in a digital landscape. Using writing skills, students will be tasked to develop first socially, through interactions on multiple levels, borrow ideas and develop thinking through a process of discovery, invention, collaboration, feedback, and co-authorship (Slavkov, 2015).

### 2.2 The Concepts of Blended learning and Critical Thinking

Blended learning offers the opportunity to step beyond the provision of an expected answer. Saxtona, (2012) agrees, holding that it is the cognitive workings of the mind that should be assessed rather than one’s ability to provide an expected response.

### 2.2.1 Blended learning

In a blended model, one that uses a combination of traditional teaching curriculum and classroom face time in combination (Bowyer & Chambers, 2017) with guided access to online lessons and online monitoring programs, students can become more self-sufficient learners. It is a system that not only caters to first language students, but second language students, those with a learning disadvantage, giving access to not only the facetime offered in the classroom, but opportunities to learn in a virtual environment (Rivera, 2017) which is self-paced, filled with additional resources and devoid of peer group pressure. Not only that, but pull tools like social media, a medium rich in English and online platforms like YouTube, become motivational drawcards that help create agency in students. Students live in this environment anyway, and very often they are better versed and prepared to acquire information and knowledge in this space more so than the teachers who are assigned to teach them (Bowyer & Chambers, 2017).

With the outbreak of Covid19, a virus that is currently changing the face of education in the world, teachers must create a place that is socially charged, emotionally safe and challenging (Perrow, 2017). A blended learning model provides this.

If students can become more engaged and challenged on multiple levels there is the potential for them to realise that they can be, and are integral to the learning process in terms of both input and output. It creates agency within individuals and adds to the group learning process. Sentiments echoed by Dr. Mitra, a TED prize recipient, in his follow up 2018 address shared a successful study into the ability of children to learn independently when provided with the tools and resources to do so. Therefore, a blended model is the next logical step beyond traditional text book learning, before the process goes completely online at some point in the future.

Student engagement is social and emotional, facilitating connections with peers (social presence) while mulling over course topics and concepts (cognitive presence) (Perrow, 2017). Bowyer and Chambers (2017) concur, citing (Garrison and Kanuka, 2004), Stating that online discussion in blended learning also develops a community of enquiry that consequently results in higher order thinking skills. It is the enquiring mind that solves problems.

Students live in an online environment, so the next challenge for teachers is to activate critical thought in students. An accumulated study of student collaboration at Wayne University suggested that blended learning can increase its chances of success by establishing a clear set of expectations, presenting material in a variety of ways; creating open ended questions; challenging students to view information from multiple perspectives and creating authentic products (Stephens and Roberts, 2017). Sentiments echoed by Yang, adding that in online collaborative environments where students are working together towards a common goal, critical thinking grows incrementally (Yang,2008), pushing and motivating each other (Perrow, 2017), although when Socratic questioning is added to the learning process, it heightens the cognitive processes of the students involved in the online collaborative discussions (Yang, 2008).

(Perrow, 2017) concurs, stating that higher order thinking in relation to course content can be established in a classroom. He believes that creating a safe environment where students are equipped with the tools to challenge, motivate and push each other to not only grow as a group and individually, but through the process of developing critical thinking push ideas and perspectives in unforeseen directions.

### 2.2.2 Critical Thinking

What is critical thinking then? A definition offered by Facione (1990) points out that a critical thinker is someone who is fluid and flexible in their stance, able to interpret, analyse, evaluate, infer and explain. Changwong, Sukkamart, & Sisan (2018) quote Plato stating that critical thinking is the tool that helps individuals find answers or solutions to a person’s confusions and problems, whereby the ability to analyze and creatively adapt to new situations is at the heart of critical thinking. A 2018 report, by the world economic forum, sees critical thinking as one of the essential future skills that everybody will need, and therefore defines it as “using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems” (Leopold, Ratcheva & Zahidiby, 2018).

There is no common definition of critical thinking though, due to its complex nature, and it is therefore difficult to teach, let alone measure. However, all agree that critical thinking is a necessary skill for societies to progress forward.

### 2.2.3 Blended writing and Critical thinking relationship

In writing we also mix and play with words to shape our ideas in a way that we can convey meaning to those around us. It is this mixing, shaping and combining of ideas that develops critical thinking, an extremely important skill in today’s world. Done well, a consequence of this higher-level thinking is that we can both influence and change the ideas of our target audience, and indeed, our own place in society.

Jordan Peterson, states that the best way to teach students critical thinking is to teach them to write (Peterson, 2017). This adds one more bridge to the concepts of writing and critical thinking.

Combining one’s ideas to create flow between concepts so that they can be easily understood by others within the confines of a sentence are the building blocks of creative thought, which is in turn extended to the scaffolding of an essay. The bridging of ideas or the creation of connections in this way, also lends itself to critical thinking.

Students are used to interacting on multiple levels of engagement simultaneously (music, videos, reading, instant messaging, commenting, chatting, etc.) and using different mediums at a constant pace in the outside world, so for classrooms that do not offer a blended source of instruction, it limits learning possibilities (Abbas, 2018; Challob, Bakar, & Latif, 2016). When classrooms can be extended in a way, to create safe, collaborative and transparent spaces (Challob, Bakar, & Latif, 2016; Saeed, Ghazali, Sahuri & Abdulrab 2018) students not only have the opportunity to grow more individually and as part of a team (Perrow, 2017), but start to learn real skills that modern employers are screaming for - collaboration, communication, problem solving and to being able to think critically in a fluid environment (Snape, 2017).

### 2.3 Case Study Methodology

Extending on my previous thesis, based on (Pei, Zheng, Zhang & Liu, 2017), a 15 point latent construct was used as a measurement tool of critical thinking. A latent construct is a term used in statistics that allows a researcher to measure the properties of something that cannot be measured (Hinton, 2004). In this instance the researcher is myself.

Relevance

Critical thinking

Dimensions 🡪

Clarity

Logicality

Profundity

Perspective

Factors 🡪 ……

Factor 1

Factor 3

Factor 2

Individually, the five dimensions above, offer very little towards the development of critical thinking, but in combination offer a path of higher order cognitive development. This is primarily because any actionable thought is produced after the careful weighting of accessible dimensions used by a student for making a decision. In my writing course students weigh the information carefully before manipulating language to develop their higher order critical thinking skills.

Based on the research conducted by Ennis, (1985) & Saxton, Belanger and Becker in (2012), and as outlined in my 2020 thesis, each of the initial five criteria provided in the above study was broken down into three separate factors (criteria), creating a total of 15 points that could be monitored to ascertain grown from pre-test through to post-test.

### 2.4 Setting of the Study

By 2030, Taiwan has a policy that seeks to make its people bilingual. Now becomes the perfect time to pivot towards the creation of second language learners who can think on their feet.

### 2.5 Participants

The research in this paper will be conducted over a year at Wenzao university. The experiment participants will come from various departments and all will meet the basic levels of English necessary to participate in the program. The class will be conducted in various classrooms and in several Google classrooms that will be set up for the blended learning.

The students will meet once a week for two hours where they will be guided in persuasive writing. The persuasive writing study will be used to examine the development of critical thinking skills and not focus specifically on SLA.

### 2.6 Pilot Test

After my 2020 exploratory thesis was able to prove that higher cognitive thinking skills could be developed in younger students, it becomes necessary to expand the initial market segment. The results of my 2020 exploratory critical thinking development research were significant.

### 2.7 Pedagogy

The new experiment will -

* Combine sentence fragments
* Create Socratic questions
* Formulate opinions
* Look at different perspectives
* Think about an intended audience
* Provide staged responses to stimulus material
* Create familiarity with Google Classroom, YouTube and other technology
* Develop learning agency
* Incorporate 15 evaluation factors
* Use all the resources at one’s disposal – both peer and web based
* Will be based on the principle of (I + 1) whereby the students will incrementally challenge themselves slightly beyond their current abilities.

# 3.0 Chapter 3 Method

#### 3.1 Design

Using a pretest and posttest design, where the topic is one that is not limited to a preconceived answer and matching it against an expanded rubric design, the professors will be able to develop the students’ critical thinking levels and SLA will also be generated as a consequence.

### 3.2Quantitative Data Analysis

Five separate tests will be used -

1. Cronbach’s Alpha
2. Consistency across the markers - Pearson Correlation (correlation coefficient) “r”
3. Improvement in critical thinking - Paired t-Test

### 3.3 Qualitative Data Analysis

1. Observations;
2. Group interviews; and
3. Questionnaire for the teachers involved

### 3.2.2 Linear Relationship

To measure the linear relationship between two variables when they are normally distributed, this paper will use the Pearson Correlation test.

### 3.2.3 Evaluating Critical Thinking Growth

A test must be used to establish higher order critical thinking development. For this I will use the Paired t-Test which determines whether means differ from each other under two conditions. It is used when you have two measurements on the same thing and lets a researcher know how significant the differences in mean scores are. This test can also be used to examine in detail the second language development that occurred as a consequence of the critical thinking course.

### 3.3.1 Qualitative Data

During the course the teacher (the researcher for this paper) sits in the perfect position to gage changes in students.

The teacher can observe -

1. the number of times a student logs into the homework section of Google classroom;
2. the number of edits that they make;
3. how the students use their peers to navigate a problem;
4. how they use their time to research beyond the initial boundaries of a question;
5. The information that they share with their classmates in the streaming section of the online platform;
6. Their classroom behavior,
7. Their participation and teamwork; and
8. How they interact with the stimulus material.

The teacher can back up these observations and the quantitative data by also conducting group interviews at the completion of the courses to gain a feel for how the students believe that they have grown both individually and as a group.

The findings in the group interviews can also be matched against the data collected by the analytical critical thinking rubric, and support the notion that, guided by a well-conceived critical thinking marking criteria, the teacher will be able to develop critical thinking in his or her students. The group interview will be recorded and a transcript will be added.

### 3.3.2 Questionnaire

A questionnaire will be used to

Professors

* ascertain the perceived workload differences between holistic grading as compared to using the critical thinking rubric that collects thinking data.
* How does the critical thinking rubric developed in my original thesis compare with holistic grading?

Students

* How do community perceptions change as a consequence of the course pivot?

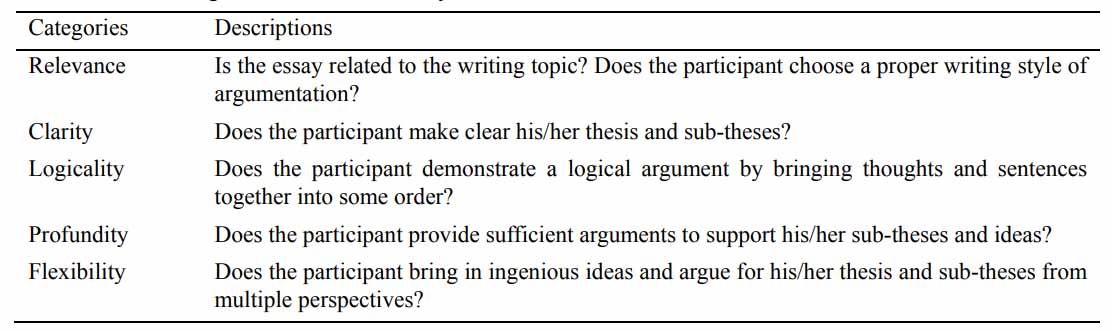
(d) How does student thinking change as a result of undertaking a critical thinking course?

(e) In terms of current student and parental expectations, how is a course in critical thinking more marketable than second language acquisition?

# Appendix A

### Initial Critical Thinking Rubric

The critical thinking criteria created as the foundation of this study are based on the 5 criteria produced by Pei, Zeng, Zhang & Liu (2017).



I have redefined each of the terms below and then expanded out the criteria to a 15-point item rubric. This rubric will be included at a later date.

# Appendix B

１：Never　　２：Not very often　　３：Sometimes　　４：Quite often　　５：Always

(1) after reading this paper, I have a better understanding of critical thinking

(2) student learning improved incrementally when challenged with material slightly above their current levels

(3) the online space created a safe and harmonious environment

(4) construct strategies from ideas that have been raised.

(5) the CT rubric didn’t take more time when compared to holistic marking.

(6) students activated their learning agency and grew more that when compared to previous years when the course has been run as SLA.

(7) be open and supportive when communicating with others.

(8) move the groupʼs ideas forward towards a strategy.

(9) be there for other group members when they need me.

(10) parents though a critical thinking course added more value to students

(Xethakis, 2019)

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